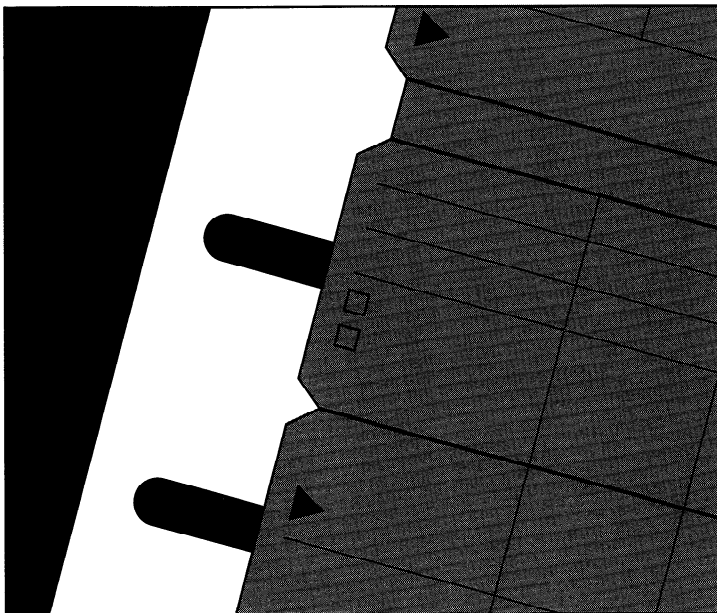


Medical Examiners' and Coroners' Handbook on Death Registration and Fetal Death Reporting



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Centers for Disease Control and Prevention
National Center for Health Statistics

Hyattsville, Maryland
October 1987 (reprinted June 1994)

Preface

This handbook is prepared by the National Center for Health Statistics, U.S. Public Health Service, Department of Health and Human Services, and contains instructions for medical examiners and coroners on the registration of deaths and the reporting of fetal deaths. It pertains to the 1989 revisions of the U.S. Standard Certificate of Death and the U.S. Standard Report of Fetal Death and the 1977 revision of the Model State Vital Statistics Act and Regulations. This handbook is intended to serve as a model for adaptation by any vital statistics registration area.

Other handbooks available as references on preparing and registering vital records are:

- *Physicians' Handbook on Medical Certification of Death*
- *Hospitals' and Physicians' Handbook on Birth Registration and Fetal Death Reporting*
- *Funeral Directors' Handbook on Death Registration and Fetal Death Reporting*
- *Guidelines for Reporting Occupation and Industry on Death Certificates*
- *Handbook on the Reporting of Induced Termination of Pregnancy*
- *Handbook on Marriage Registration*
- *Handbook on Divorce Registration*

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Introduction

Purpose

This handbook is designed to acquaint medical examiners and coroners with the vital registration system in the United States and to provide instructions for completing and filing death certificates and fetal death reports. Emphasis has been directed toward the certification of medical information relating to these events when they come within the jurisdiction of the medical-legal officer.

A significant number of the deaths occurring in the United States must be investigated and certified by a medical-legal officer. Although State laws vary in specific requirements, generally speaking, the deaths that require investigation are those due to violence—that is, accident, suicide, or homicide—or those due to natural disease processes when the death occurred suddenly and without warning or when the decedent was not being treated by a physician.

In those cases where death is not the result of accident, suicide, or homicide, some States include in their laws a specific time period regarding how recently treatment must have been provided by a physician for that physician to be authorized to complete the medical certification of cause of death. These time limits vary from State to State. In some States where no time limit is specified, it is left to interpretation or local custom to determine whether the cause of death should be completed by a physician or by the medical-legal officer. If, based on local practice, it is determined that the decedent was not being treated by a physician, or if death was the result of a disease other than the one for which the decedent was being treated, the medical-legal officer should be notified. The medical-legal officer should investigate the case and ensure that the medical certification of cause of death is properly completed.

Because State laws, regulations, and customs do vary significantly regarding which cases must be investigated by a medical-legal officer, each medical-legal officer must become familiar with practices within the officer's area and ensure that all cases falling within his or her jurisdiction are properly investigated. If there is any doubt as to jurisdiction, the medical-legal officer should assume jurisdiction.

Importance of death registration and fetal death reporting

A death certificate is a permanent record of the fact of death of an individual. The information contained within the record is considered to be prima facie evidence of the fact of death. It can therefore be introduced in court as evidence when a question about the death arises.

Statistical data from death certificates are used to identify public health problems and to measure the results of programs established to alleviate these problems. The allocation of medical and nursing services and follow up on infectious diseases (for example, deaths due to AIDS) are carried out with information provided by mortality statistics.

Mortality statistics provide a method to identify disease etiology and evaluate diagnostic and therapeutic techniques. They are used to assess the general health of the population, to evaluate the successes of medical treatments, to examine medical problems which may be found among specific groups of people, and to indicate areas in which medical research can have the greatest impact on reducing mortality. The quality of the statistics generated from the data depends on the quality of each individual certificate.

The fetal death report is recommended as a legally required statistical report. However, in a number of States it remains a legal certificate. The record, whether a certificate or a report, provides valuable health and research data. The information is used to study the causes of negative pregnancy outcome. These data are also essential in planning and evaluating prenatal care services and obstetrical programs. They are also used to examine the consequences of possible environmental and occupational exposures of parents on the fetus.

U.S. Standard certificates and reports

The National Center for Health Statistics, U.S. Public Health Service, Department of Health and Human Services, provides leadership and coordination in the development of standard certificates and reports to serve as models for use by the States. These certificates and reports are revised periodically in collaboration with State health officials, registrars, and statisticians and with Federal agencies and other providers or users of vital statistics, such as medical examiners, coroners, physicians, local registrars, midwives, medical record personnel, and funeral directors. The purpose of the revision is to ensure that the data collected relate to current and future needs. In the revision process, each item on the standard certificates and reports is evaluated thoroughly for its registration, legal, statistical, medical, and research value.

Each State is encouraged to adopt the recommended standard certificates and reports as a means of developing a uniform national vital registration and statistics system. Although many States use the recommended standard certificates and reports, some States modify them to comply with State laws and regulations or to meet particular needs for information within their State.

Uniformity of data allows for comparable national statistics and for the comparison of individual State data with national data. It also allows the comparison of individual State data with data from other States. Uniformity of death certificates among the States also increases their acceptability as legal records.

Confidentiality of vital records

State and local registrars protect the information on vital records from unwarranted or indiscriminate disclosure. Vital records are available only to persons who are authorized access by State law and supporting regulations. Legal safeguards to the confidentiality of vital records have been strengthened in recent years. Medical-legal officers, hospitals, and physicians are assured that extensive legal and administrative measures are used to protect individuals and establishments from unauthorized disclosure of personal information.

The fetal death report is designed primarily to collect information for statistical and research purposes. In many States these records are not maintained in the official files of the State health department. Most States never issue certified copies of these records; the other States issue certified copies very rarely.

Medical examiner's or coroner's responsibility

Death registration

The medical examiner's or coroner's principal responsibility in death registration is to complete the medical part of the death certificate. Before delivering the death certificate to the funeral director, he or she may add some personal items for proper identification, such as name, residence, race, and sex. Under certain circumstances and in some jurisdictions, he or she may provide all the information, medical and personal, required on the certificate.

The funeral director, or other person in charge of interment, will otherwise complete those parts of the death certificate that call for personal information about the decedent. He or she is also responsible for filing the certificate with the registrar where the death occurred. Each State prescribes the time within which the death certificate must be filed with the registrar.

In general, the duties of the medical examiner or coroner are to:

- Enter or verify the date of death (month, day, year).
- Enter or verify the time of death.
- Complete the cause-of-death section.

- Complete the certifier section.
- Deliver the signed death certificate to the funeral director promptly so that the funeral director can file it with the State or local registrar within the State's prescribed time.
- Cooperate with the local or State registrar by replying promptly to any queries concerning any entries on the death certificate.
- Deliver a supplemental report of cause of death to the State vital statistics office when autopsy findings or further investigation reveal the cause of death to be different from that originally reported.

When the cause of death cannot be determined within the statutory time limit, a death certificate should be filed with the notation that the report of the cause of death is "deferred pending further investigation." A permit to authorize disposal or removal of the body can then be obtained.

If there are other reasons for a delay in completing the medical portion of the certificate, the registrar should be given written notice of the reason for the delay.

When the circumstances of death (accident, suicide, or homicide) cannot be determined within the statutory time limit, the cause-of-death section should be completed and the manner of death should be shown as "pending investigation."

As soon as the cause of death or manner of death is determined, the medical-legal officer should file a supplemental report with the registrar, or correct or amend the death certificate, according to State and local regulations regarding this procedure.

When a body has been found after a long period of time, the medical-legal officer should estimate the date and time of death as accurately as possible. If an estimate is made, the information should be entered as "APPROX—date" and/or "APPROX—time."

Fetal death reporting

In some jurisdictions the medical-legal officer is required to complete reports of fetal death when the fetal death occurred without medical attendance or occurred under strange or unusual circumstances or was a result of an accident, suicide, or homicide. When completing a report of fetal death, the medical-legal officer is to:

- Enter or verify the place and date of delivery (month, day, year).
- Complete or verify the medical and health information section.
- Complete the cause-of-fetal-death section.
- Return the fetal death report to the person or institution charged by State law with the responsibility for filing the report.

- If the medical-legal officer is required by State law to fill out a report of fetal death when the fetal death occurs outside a hospital or other institution, complete such a report and send it directly to the local or State registrar.

When abandoned infants are found dead, a problem may arise as to whether the event should be registered as a fetal death or an infant death. If the infant is considered to have lived, even for a very short time, following delivery, then the medical-legal officer will use the death certificate usually employed. He or she must also ensure that the birth of this infant is properly registered. If the infant is considered to be stillborn, then the appropriate fetal death report must be completed.

Part I—General instructions for completing certificates and reports

Aside from the facts related to medical certification, the medical-legal officer may need to obtain some or all of the personal information required on the certificate or report.

In some jurisdictions the medical-legal officer is not required to complete all of the personal items. He or she may complete and sign the medical certification section and add a few identifying items, such as name, age, sex, race, and residence. The certificate or report is then given to the funeral director who completes the remainder of the record.

In other jurisdictions the medical-legal officer customarily completes all the personal items. Under such conditions the medical-legal officer must obtain the information from an informant who has knowledge of the facts.

The informant is usually a member of the family or a friend of the family. The following individuals can be the informant and are listed in order of preference: Spouse, one of the parents, one of the children of the decedent, another relative, or other person who has knowledge of the facts. At times the medical-legal officer will have to obtain personal information from a physician or a hospital official. In some cases, information will be obtained from the police.

Whatever the source may be, the name and mailing address of the informant must appear on the certificate in the space provided.

It is essential that the certificates and reports be prepared as permanent durable records:

- File the original certificate or report with the registrar. Reproductions or duplicates are not acceptable.
- Avoid abbreviations except those recommended in the specific item instructions.
- Verify with the informant the spelling of names, especially those that have different spellings for the same sound (for example, Smith or Smyth, Gail or Gayle, Wolf or Wolfe).
- Refer problems not covered in these instructions to the State office of vital statistics or to the local registrar.

- Use the current form designated by the State.
- Type all entries whenever possible. If a typewriter cannot be used, print legibly in permanent black ink.
- Complete each item, following the specific instructions for that item.
- Do not make alterations or erasures.
- Obtain all signatures; rubber stamp or other facsimile signatures are not acceptable.

Part II—Medical certification

Certifying to the cause of death

The medical-legal officer's primary responsibility in death registration is to complete the medical part of the death certificate. The medical certification includes information on the causes and manner of death and related factors, such as the place of death and the date and time of the legal pronouncement of death.

The proper completion of this section of the certificate is of utmost importance to the efficient working of a medical-legal investigative system.

Method of certification

The cause-of-death section on the death certificate consists of two parts, the first relating to the sequence of events leading to death and the second to other significant conditions that contributed to the death but did not lead to the underlying cause. It is designed to facilitate reporting the underlying cause of death and to obtain information on the causal and pathological sequence of events leading to death.

In certifying causes of death, the disease or condition should be reported in specific diagnostic terms. Analyzing the multiple conditions contributing to death is a very complex process. In compiling mortality statistics for the United States, all reported conditions are reviewed to determine the death sequence. It is therefore important that all information concerning the death be included in both Part I and Part II of the certificate. In addition, there are questions relating to autopsy, manner of death, and injury.

Certifier section

The medical-legal officer certifies that: "On the basis of examination and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner as stated."

CERTIFIER	31a. CERTIFIER <i>(Check only one)</i>		
	<input type="checkbox"/> CERTIFYING PHYSICIAN <i>(Physician certifying cause of death when another physician has pronounced death and completed Item 23)</i> <i>To the best of my knowledge, death occurred due to the cause(s) and manner as stated.</i>		
	<input type="checkbox"/> PRONOUNCING AND CERTIFYING PHYSICIAN <i>(Physician both pronouncing death and certifying to cause of death)</i> <i>To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner as stated.</i>		
	<input type="checkbox"/> MEDICAL EXAMINER/CORONER <i>On the basis of examination and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner as stated.</i>		
31b. SIGNATURE AND TITLE OF CERTIFIER		31c. LICENSE NUMBER	31d. DATE SIGNED <i>(Month, Day, Year)</i>

The phrase “in my opinion” is included because it is recognized that in medical-legal cases it is not always possible to make precise determinations of the date and the cause(s) of death. The date may be obscure in the case of bodies found some time after death occurred, and the relationship between the existing diseases or the sequence in which diseases or injuries occurred is not always clear.

However, except in unusual circumstances, the medical-legal officer is in a better position than any other individual to make a judgment as to which of the conditions led directly to death and to state the antecedent conditions, if any, that gave rise to this cause.

Space is provided for the time of death and for the date the decedent was pronounced dead. When the exact time of death is unknown, but there is sufficient basis for the medical-legal officer to render an opinion, the approximate time of death as estimated by the medical-legal officer will be given. This information should be entered as “APPROX—time.” Local time should be used, recording hours and minutes (for example, 7:25 a.m.).

The medical-legal officer signs the completed statement, adding his or her degree or title and license number. The date of certification and mailing address of the medical-legal officer should also be provided.

Cause of death

A cause of death is a disease, abnormality, injury, or poisoning that contributed directly or indirectly to death. A death often results from the combined effect of two or more conditions.

This section must be completed by the medical examiner or coroner. The cause-of-death section, a facsimile of which is shown on page 10, follows guidelines recommended by the World Health Organization. An important feature is the underlying cause of death determined by the medical-legal officer and defined as (a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury. In addition to the underlying cause of death, this section provides for reporting the entire sequence of events leading to death as well as other conditions significantly contributing to death.

The World Health Organization recommends that its signatory nations use the underlying cause of death for basic mortality statistics. However, information on the other diseases

or, conditions that led to death and the other significant conditions that contributed to death is also important. The cause-of-death section thus obtains information that is used to examine the frequency of certain diseases or conditions being reported on the death certificate, whether or not they are the underlying cause. The analysis of all conditions reported on the death certificate (multiple causes of death) is especially important in studying diseases or conditions that are rarely the underlying cause of death, but often contribute to death (for example, pneumonia or diabetes).

The cause-of-death section is designed to elicit the opinion of the medical certifier as to the immediate cause, the antecedent causes, and the underlying cause, as well as the contributing causes of death. The cause(s) of death to be entered are all those diseases, morbid conditions, or injuries that either resulted in or contributed to death and the circumstances of the accident or violence that produced any such injuries.

The mode of dying, such as cardiac or respiratory arrest, should not be reported as it is a statement not specifically related to the disease process, and it merely attests to the fact of death. The mode of dying therefore provides no additional information on the cause of death.

CAUSE OF DEATH

27. PART I. Enter the diseases, injuries or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.

IMMEDIATE CAUSE (Final disease or condition resulting in death) → a

DUE TO IOR AS A CONSEQUENCE OF:

b

DUE TO IOR AS A CONSEQUENCE OF:

c

DUE TO IOR AS A CONSEQUENCE OF:

d

DUE TO IOR AS A CONSEQUENCE OF:

Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST

Approximate interval between Onset and Death

PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I

28a. WAS AN AUTOPSY PERFORMED?
(Yes or no)

28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)

29. MANNER OF DEATH

☐ Natural

☐ Pending Investigation

☐ Accident

☐ Suicide

☐ Homicide

☐ Could not be Determined

30a. DATE OF INJURY
(Month, Day, Year)

30b. TIME OF INJURY
M

30c. INJURY AT WORK?
(Yes or no)

30d. DESCRIBE HOW INJURY OCCURRED

30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. /Specif./

30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)

The completion of the cause-of-death section for a medical-legal case requires careful consideration due to special problems that may be involved. The medical-legal case may depend upon toxicologic examination for its ultimate cause-of-death certification, a situation not encountered as frequently in ordinary medical practice. Occasionally the medical-legal officer must deal with death certifications in which the cause of death is not clear, even after autopsy and toxicologic examination. Despite these special problems which the medical-legal officer may encounter in dealing with causes of death, it is important that the medical certification be as accurate and complete as circumstances allow.

Part I of the cause-of-death

Only *one* cause is to be entered on each line of Part I. Additional lines should be added between the printed lines when necessary. The underlying cause of death should be entered on the lowest line used in Part I. The underlying cause of death is the

disease or injury that initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence that produced the fatal injury. Conditions in Part I should represent a distinct sequence so that each condition may be regarded as being the consequence of the condition entered immediately below it. When a condition does not seem to fit into such a sequence, consider whether it belongs in Part II.

Line (a) immediate cause

The immediate cause of death is reported on line (a). This is the final disease, injury, or complication leading directly to death. It may be the only entry in the cause-of-death section if only one condition were present at death. There must *always* be an entry on line (a). In the case of a violent death, enter the result of the external cause (for example, fracture of vault of skull, crushed chest).

Line (b) due to (or as a consequence of)

The disease, injury, or complication, if any, that gave rise to the immediate cause of death is reported on line (b). This condition must have been present before the immediate cause in terms of both time and pathological relationship. If it is believed to have prepared the way for the immediate cause, a condition can be considered as antecedent to the immediate cause even though a long interval of time has elapsed since its onset. In case of injury, the form of external violence or accident is antecedent to an injury entered on line (a) and should be entered on line (b), although the two events are almost simultaneous (for example, automobile accident or fallen on by tree).

Lines (c) and (d) due to (or as a consequence of)

The condition(s), if any, that gave rise to the antecedent condition(s) on lines (b) and (c) are reported on lines (c) and (d). These condition(s) must be considered antecedent to the cause(s) entered with respect to both time and pathological relationship. These condition(s) can be antecedent to the cause(s) entered even though a long interval of time has elapsed since their onset. In case of injury, the form of external violence or accident is antecedent to an injury entered although the two events are almost simultaneous.

If the decedent had more than four causally related conditions leading to death, lines (e), (f), and so forth, should be added by the certifier so that all conditions related to the immediate cause of death are entered in Part I, each on a separate line. The following certification is an example in which the cause-of-death section was modified to record all conditions related to the immediate cause of death.

Approximate interval between onset and death

Space is provided at the end of lines (a), (b), (c), and (d) for recording the interval between the presumed onset and the date of death. This should be entered for *all* causes—the immediate cause, antecedent conditions, and the underlying cause. These intervals usually are established by the medical examiner or coroner on the basis of available information. In some cases the interval will have to be estimated. The time of onset may be obscure or entirely unknown, in which case the medical-legal officer can state that the interval is “Unknown.” Do not leave this space blank.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) →		a. <u>Asphyxia by vomitus</u> <small>DUE TO IOR AS A CONSEQUENCE OF:</small>			minutes	
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>Cerebellar hemorrhage</u> <small>DUE TO IOR AS A CONSEQUENCE OF:</small>			hours	
		c. <u>Hypertension</u> <small>DUE TO IOR AS A CONSEQUENCE OF:</small>			About 3 yrs	
		d. <u>Primary aldosteronism</u> e. <u>Adrenal adenoma</u>			11 years	
PART II Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) No	
<u>Congestive heart failure</u>					28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)	
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY M	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED	
		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify)		30f. LOCATION (Sheet and Number or Rural Route Number, City or Town, State)		

Part II of the cause-of-death (other significant conditions)

Any other important disease or condition that was present at the time of death, and that may have contributed to death but did not result in the underlying cause of death listed in Part I, should be recorded on this line. For example, a patient who died of alcoholism may also have had a hypertensive heart disease that contributed to the death. In this case, the hypertensive heart disease would be entered in Part II as a contributory cause of death. If the decedent was pregnant, or less than 90 days' postpartum at the time of death, and the pregnancy contributed to death, the fact of pregnancy should be indicated here. If the presence of infectious disease has not been noted in Part I, record it here.

For some cases it may not be possible to make a precise determination of interacting causes of death or to determine the immediate cause of death. For these cases a judgment may be made on the basis of probabilities.

If the certifier is unable to establish a cause of death based upon reasonable medical certainty, or that such a condition was more probably than not the cause of death, the certifier should enter "Unknown" in the cause-of-death section. However, "Unknown" should be used only after all possible efforts, including an autopsy, have been made to determine the cause.

Other items for medical certification

The remaining items that require the medical examiner's or coroner's certification relate to autopsy, manner of death, and injury.

Autopsy—The medical-legal officer should indicate whether an autopsy was performed and whether the findings were available prior to completion of the cause of death. If additional medical information or autopsy findings are received after the medical-legal officer has certified to the cause of death and he or she determines the cause to be different from that originally entered on the death certificate, the original certificate

should be amended by filing a supplemental report of cause of death with the State registrar. Information on the proper form to use and procedure to follow can be obtained from your State registrar.

Circumstances of injury or violence—Space is provided on the death certificate for reporting the manner of death; check one of the following boxes: Natural, Accident, Suicide, Homicide, Pending investigation, or Could not be determined. If “Pending investigation” is checked, it should be changed after the investigation is completed. Use the appropriate amendment procedures in your State to modify this item.

When the death was the result of an external cause, the medical-legal officer should specify whether it was an accident, suicide, or homicide and describe the circumstances in items 30a-f. In item 30d a clear, brief statement as to how the injury occurred should be made, indicating the circumstances or cause, such as “Burned using gasoline to light stove,” “Slipped and fell while shoveling snow,” “Self-inflicted handgun wound,” or “Stabbed by sharp instrument.”

Bearing in mind that accident prevention programs, assessment of motor vehicle fatalities, and so forth, depend upon the proper wording of this item, the medical-legal officer should, in as few words as possible, describe the injury-producing situation. If the death was due to an automobile accident, be sure to indicate whether the decedent was a driver, passenger, or pedestrian.

The medical-legal officer should state whether the injury occurred while the deceased was at work at his or her usual occupation and give the specific location where the accident took place.

In those cases of violent death where the medical-legal officer cannot decide which of the terms—accident, suicide, or homicide—best describes the manner of death, “Could not be determined” should be checked. The medical-legal officer should bear in mind that “Could not be determined” is intended solely for cases in which it is impossible to establish with reasonable medical certainty the circumstances of death *after* thorough investigation.

Special problems of the medical-legal officer

The medical examiner or coroner may experience little difficulty completing most of the items on the death certificate, if death occurred under well-defined circumstances. Frequently, however, direct evidence related to cause of death is nonexistent or there is some doubt concerning facts related to the individual. Under these circumstances, the medical-legal officer should report the facts when they are available, make estimations where such are possible, and where no facts are known and no estimations possible, indicate “Unknown.”

Some special problems related to certification by a medical-legal officer are discussed on page 14.

Precision of knowledge required to complete death certificate items

The cause-of-death section in the medical-legal officer's certification is always an opinion. This opinion is, of course, a synthesis of all information derived from both the investigation into the circumstances surrounding the death and the autopsy, if performed. It represents the best effort of the medical-legal officer to reduce to a few words his or her entire synthesis of the cause of death.

In some cases, certain items (such as age, race) may be unknown and the medical-legal officer must make his or her best estimate of these items. A best estimate of the manner of death and the time and date of injury may also be required when neither investigation nor examination of the deceased provides definitive information.

The medical-legal officer may wish to devote some thought to the degree of "proof" necessary to properly certify deaths that may later be involved in litigation. He or she may wish to consider that the proof required in a criminal proceeding is of a higher degree of positivity than that required in a civil proceeding.

Trauma as a cause of death

It should be noted by all medical-legal officers that if trauma is either the underlying cause of death or a contributing cause of death, the manner of the onset of the trauma must be indicated; that is, the trauma must have been initiated by an accident, a suicidal venture, or a homicidal event. It may be impossible for the certifier to determine which of these three fits the particular case at hand, in which case it may be necessary to state that the manner of death could not be determined. If trauma is listed in Part I or II of item 27, then items 30a–f must be completed.

Accident vs. suicide

One of the more difficult tasks of the medical-legal officer is to determine whether a death is an accident or the result of an intent to end life. The medical-legal officer must use all information available to make a determination about the death. This may include information from his or her own investigation, police reports, staff investigations, and discussions with the family and friends of the decedent.

A set of operational criteria for the determination of suicide has been developed by a working group of individuals representing the American Academy of Forensic Sciences, American Association of Suicidology, Association for Vital Records and Health Statistics, Centers for Disease Control, International Association of Coroners and Medical Examiners, National Association of Counties, National Association of Medical Examiners, and the National Center for Health Statistics. These criteria may be helpful both during your investigation and in making the final determination as to whether the death was an accident or a suicide.

If you would like more information regarding these criteria or to find out if they have changed, you should contact either the National Association of Medical Examiners,

the American Academy of Forensic Sciences, or the International Association of Coroners and Medical Examiners.

Operational Criteria for Determination of Suicide

I. *Self Inflicted*: There is evidence that death was self-inflicted. Pathological (autopsy), toxicological, investigatory, and psychological evidence, and statements of the decedent or witnesses, may be used for this determination.

II. *Intent*: There is evidence (explicit and/or implicit) that at the time of injury the decedent intended to kill self or wished to die and that the decedent understood the probable consequences of his or her actions.

A. Explicit verbal or nonverbal expression of intent to kill self.

B. Implicit or indirect evidence of intent to die, such as the following:

- Preparations for death, inappropriate to or unexpected in the context of the decedent's life.
- Expression of farewell or desire to die, or acknowledgment of impending death.
- Expression of hopelessness.
- Effort to procure or learn about means of death or rehearse fatal behavior.
- Precautions to avoid rescue.
- Evidence that decedent recognized high potential lethality of means of death.
- Previous suicide attempt.
- Previous suicide threat.
- Stressful events or significant losses (actual or threatened).
- Serious depression or mental disorder.

When cause cannot be determined

It is well known that a professionally competent, searching autopsy and toxicologic examination of the body fluids and organs, coupled with the best available bacteriologic, virologic, and immunologic studies, may fail to reveal the cause of death.

If this is the case and if the investigation has been pursued as far as possible, then the medical-legal officer will have no recourse but to indicate in one form or another that the cause of death "Could not be determined." One possible phrase is "Cause of death not determined at autopsy and toxicologic examination." This is better than the term "Unknown" as it at least indicates the extent of the investigation undertaken.

Deferred “pending investigation”

Most, if not all, medical-legal investigative systems make provisions for cases in which the cause or manner of death cannot be immediately determined. Local laws vary somewhat as to how to handle such cases.

The procedure followed most frequently is to require that the death certificate be completed insofar as possible and filed within the time limits specified by law. Once the cause and/or manner of death are determined, a supplemental report must be prepared and filed by the medical-legal officer. This supplemental report becomes a part of the death certificate that is on file for the decedent.

It should be emphasized that the death certificate that is filed is to be completed insofar as possible. In other words, if the cause of death is known, but it is not known whether it was the result of an accident, suicide, or homicide, the death certificate that is filed should include the cause of death and show the manner of death in item 29 as “Pending investigation.” THE CAUSE OF DEATH SHOULD NEVER BE LEFT BLANK OR SHOWN AS “PENDING” WHEN IT IS KNOWN BUT THE MANNER OF DEATH, ACCIDENT, SUICIDE, OR HOMICIDE IS UNKNOWN.

The concept of “pending investigation” is made more necessary by the gradual increase in the sophistication of toxicologic and immunologic methods of investigation. This concept, however, poses some complications. One of these is the proper issuing of certified copies of death certificates when the certificate is not complete. Another is the establishment of the maximum amount of time that may elapse between the time of the issue of the “pending” certificate and the final completion of the certificate. This time interval is established by statute in some jurisdictions, by custom or local arrangements in others. The medical-legal officer must operate within the legal limitations set in his or her area.

Because such cases should be held to a minimum, the following guidelines were recommended by the Subcommittee on the Medical Certification of Medicolegal Cases of the U.S. National Committee on Vital and Health Statistics:¹

- “1. The term ‘pending’ is intended to apply only to cases in which there is a reasonable expectation that an autopsy, other diagnostic procedure, or investigation may significantly change the diagnosis.”
- “2. Certifications of cause of death should not be deferred merely because ‘all details’ of a case are not available. Thus, for example, if it is clear that a patient died of ‘cancer of the stomach,’ reporting of the cause should not be deferred while a determination of the histological type is being carried out. Similarly, if a death is from ‘influenza,’ there is no justification for delaying the certification because a virological test is being carried out.”
- “3. In cases where death is known to be from an injury, but the circumstances surrounding the death are not yet established, the injury should be reported immediately. The

¹U.S. National Committee on Vital and Health Statistics. 1960. *Medical Certification of Medicolegal Cases*. Public Health Service. Washington, D.C.

circumstances of the injury should be noted as ‘pending investigation’ and a supplemental report filed.”

“4. Lastly, the term ‘pending’ is not intended to apply to cases in which the cause of death is in doubt and for which no further diagnostic procedures can be carried out. In this case, the ‘probable’ cause should be entered on the basis of the facts available and the certification made in accordance with the best judgment of the certifier.”

The medical-legal officer must realize that when a death certificate is “pending,” the final settlement of burial expenses, insurance claims, veterans benefits, and so forth, is slowed. Indeed, many such matters will be held open until the certificate is properly completed. Therefore, the use of the term “pending investigation,” or similar deferring terms, should be avoided whenever possible.

Correcting or adding information

Subsequent to filing the death certificate with the registrar, further investigation may uncover additional or different information. This may necessitate a change in the death certificate. The medical-legal officer then must inform the registrar on a supplemental report of death, or by letter if no form is available, of the changes necessary and the reason for the changes.

Examples of medical certification

This section contains several examples of medical certification for the guidance of the medical-legal officer.

Case No. 1

On January 2, 1989, a 21-year-old female was critically injured in an automobile accident and died from a fractured skull causing cerebral hemorrhage soon after being

27. PART I. Enter the diseases, injuries, or complications that caused the death arrest, shock, or heart failure. List only one cause on each line					Do not enter the mode of dying, such as cardiac or respiratory		Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death)		Cerebral hemorrhage						30 minutes
		DUE TO (OR AS A CONSEQUENCE OF):						
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. Fractured skull						30 minutes
		DUE TO (OR AS A CONSEQUENCE OF):						
		c. Automobile accident						30 minutes
		DUE TO (OR AS A CONSEQUENCE OF):						
		d.						
CAUSE OF DEATH		PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					28a. WAS AN AUTOPSY PERFORMED? (Yes or no)	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)
							Yes	Yes
29. MANNER OF DEATH		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED			
<input type="checkbox"/> Natural <input checked="" type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Homicide		Jan. 2, 1989	2:15 a.m.	No	Driver in auto-auto collision			
<input type="checkbox"/> Pending Investigation <input type="checkbox"/> Could not be Determined		30e. PLACE OF INJURY - At home, farm, street, factory, office building, etc. (Specify)			30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)			
		City Street			21st and Ash Street, Yvelene, Nevada			

brought to the hospital. Police records indicated she was the driver in a two-car collision which occurred at 2:15 a.m. at the corner of 21st Street and Ash Street. Autopsy yielded no additional information related to the accident or cause of death.

Case No. 2

On May 15, 1989, a 49-year-old male gardener was brought to the emergency room with an infected wound of the right foot. Because of repeated convulsions, he was admitted to the hospital. The examining physician made a diagnosis of tetanus. His wife reported that while employed as a gardener on April 1, 1989, he stepped on a garden rake. He treated the laceration himself. Patient died of asphyxia during convulsions May 16, 1989. Autopsy supported diagnosis.

CAUSE OF DEATH	27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
	IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Asphyxia</u>					<u>minutes</u>	
	DUE TO (OR AS A CONSEQUENCE OF):						
	b. <u>Convulsions</u>					<u>2 weeks</u>	
	DUE TO (OR AS A CONSEQUENCE OF):						
CAUSE OF DEATH	Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST						
	c. <u>Tetanus</u>					<u>6 weeks</u>	
	DUE TO (OR AS A CONSEQUENCE OF):						
	d. <u>Infected laceration of foot</u>					<u>6 weeks</u>	
	DUE TO (OR AS A CONSEQUENCE OF):						
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					28a. WAS AN AUTOPSY PERFORMED? (Yes or no)	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)	
					Yes	Yes	
29. MANNER OF DEATH		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED		
<input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input checked="" type="checkbox"/> Accident		<u>April 1, 1989</u>	<u>3:00 p</u>	<u>Yes</u>	<u>Stepped on rake while gardening</u>		
<input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify)		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)			
		<u>Private Yard</u>		<u>221 Folk Avenue, Lowell, Vermont</u>			

Case No. 3

On May 10, 1989, a 25-year-old male was admitted to the hospital with a gunshot wound to the head. He had been at home in his study cleaning his gun when the shot was fired at approximately 9:00 p.m. There was no evidence of suicide or homicide. He died at 11:05 p.m. on the same day.

CAUSE OF DEATH	27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
	IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Cerebral hemorrhage</u>					<u>2 hours</u>	
	DUE TO (OR AS A CONSEQUENCE OF):						
	b. <u>Gunshot wound, head</u>					<u>2 hours</u>	
	DUE TO (OR AS A CONSEQUENCE OF):						
CAUSE OF DEATH	Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST						
	c. _____						
	DUE TO (OR AS A CONSEQUENCE OF):						
	d. _____						
	DUE TO (OR AS A CONSEQUENCE OF):						
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					28a. WAS AN AUTOPSY PERFORMED? (Yes or no)	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)	
					No		
29. MANNER OF DEATH		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED		
<input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input checked="" type="checkbox"/> Accident		<u>May 10, 1989</u>	<u>9:00 p M</u>	<u>No</u>	<u>Loaded gun discharged during cleaning</u>		
<input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify)		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)			
		<u>Home</u>		<u>3129 Discus Avenue, Columbus, Alabama</u>			

Case No. 4

On June 21, 1989, a 39-year-old male had been in a powerboat which capsized after striking an underwater obstruction at about 2:00 p.m. The body was recovered 2 hours later by the water patrol. Blood alcohol was measured at 0.31 gm percent.

CAUSE OF DEATH	27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.			Approximate Interval Between Onset and Death
	IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Asphyxia</u> DUE TO IOR AS A CONSEQUENCE OF:			Unknown
	Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST b. <u>Drowning</u> DUE TO IOR AS A CONSEQUENCE OF:			Unknown
	c. _____ DUE TO IOR AS A CONSEQUENCE OF:			
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I				
<u>Alcohol intoxication (0.31 gm percent)</u>				
28a. WAS AN AUTOPSY PERFORMED? (Yes or no)		28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)		
Yes		Yes		
29. MANNER OF DEATH				
<input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input checked="" type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide				
30a. DATE OF INJURY (Month, Day, Year)		30b. TIME OF INJURY		30c. INJURY AT WORK? (Yes or no)
June 21, 1989		2:00 pm		No
30d. DESCRIBE HOW INJURY OCCURRED				
Fell in lake from powerboat when it hit underwater obstruction				
30e. PLACE OF INJURY - At home, farm, street, factory, office building, etc. (Specify)		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)		
Public Lake		Lake Tarpon, Elkton, Idaho		

Case No. 5

On January 12, 1989, a 2-year-old female was admitted to the hospital with salicylic poisoning. She had been under treatment for tonsillitis and upper respiratory infection. She had inadvertently been given an excessive dose of aspirin. She died on January 15, 1989.

CAUSE OF DEATH	27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.			Approximate Interval Between Onset and Death
	IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Salicylism</u> DUE TO IOR AS A CONSEQUENCE OF:			3 days
	Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST b. <u>Overdose of aspirin</u> DUE TO IOR AS A CONSEQUENCE OF:			3 days
	c. _____ DUE TO IOR AS A CONSEQUENCE OF:			
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I				
<u>Acute tonsillitis and Upper respiratory infection</u>				
28a. WAS AN AUTOPSY PERFORMED? (Yes or no)		28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)		
Yes		Yes		
29. MANNER OF DEATH				
<input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input checked="" type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide				
30a. DATE OF INJURY (Month, Day, Year)		30b. TIME OF INJURY		30c. INJURY AT WORK? (Yes or no)
Jan. 12, 1989		7:05A M		No
30d. DESCRIBE HOW INJURY OCCURRED				
Overdose of aspirin given				
30e. PLACE OF INJURY - At home, farm, street, factory, office building, etc. (Specify)		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)		
Own Home		2139 Carlton Avenue, New Haven, Oregon		

Case No. 6

On May 5, 1989, a 54-year-old male was found dead from carbon monoxide poisoning in an automobile in a closed garage. A hose, running into the passenger compartment of the car, was attached to the exhaust pipe. The deceased had been despondent for

some time as a result of a malignancy, and letters found in the car indicated intent to take his own life.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.		Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) → Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST	a	<u>Carbon monoxide poisoning</u>	<u>Unknown</u>
	DUE TO IOR AS A CONSEQUENCE OF:		
	b	<u>Inhaled auto fumes</u>	<u>Unknown</u>
	DUE TO IOR AS A CONSEQUENCE OF:		
c	DUE TO IOR AS A CONSEQUENCE OF:		
d	DUE TO IOR AS A CONSEQUENCE OF:		
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I		28a. WAS AN AUTOPSY PERFORMED? (Yes or no)	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)
<u>Cancer of stomach</u>		Yes	Yes
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input checked="" type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide	30a. DATE OF INJURY (Month, Day, Year) <u>May 5, 1989</u>	30b. TIME OF INJURY <u>Unknown</u>	30c. INJURY AT WORK? (Yes or no) <u>No</u>
30d. DESCRIBE HOW INJURY OCCURRED <u>Inhaled carbon monoxide from auto enclosed in garage</u>			
30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify) <u>Own home—garage</u>		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State) <u>898 Sylvan Road, Alexandria, Missouri</u>	

Case No. 7

A 32-year-old male was admitted to the hospital on August 23, 1989, with several stab wounds. He had been found in an alley off Smith Street at 4:00 a.m. by the police. No weapon was discovered. He died at 6:30 p.m. on the same day. Autopsy revealed that the pulmonary hemorrhage due to the stab wound of the lung could be considered fatal.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.		Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) → Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST	a	<u>Pulmonary hemorrhage</u>	<u>15 hours</u>
	DUE TO IOR AS A CONSEQUENCE OF:		
	b	<u>Stab wound of lung</u>	<u>15 hours</u>
	DUE TO IOR AS A CONSEQUENCE OF:		
c	DUE TO IOR AS A CONSEQUENCE OF:		
d	DUE TO IOR AS A CONSEQUENCE OF:		
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I		28a. WAS AN AUTOPSY PERFORMED? (Yes or no)	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)
<u>Several stab wounds of abdomen and extremities</u>		Yes	Yes
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input checked="" type="checkbox"/> Homicide	30a. DATE OF INJURY (Month, Day, Year) <u>Aug. 23, 1989</u>	30b. TIME OF INJURY <u>Approx- 3:30 a m</u>	30c. INJURY AT WORK? (Yes or no) <u>No</u>
30d. DESCRIBE HOW INJURY OCCURRED <u>Stabbed by sharp instrument</u>			
30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify) <u>Alley</u>		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State) <u>Alley between 331 and 333 Smith Street Davidsonville, Maryland</u>	

Case No. 8

On July 4, 1989, a 56-year-old male was found dead in a hotel. Autopsy revealed asphyxiation due to aspiration of vomitus—a result of acute alcohol intoxication. Blood alcohol level was 0.350 gm percent.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate interval Between Onset and Death
IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Asphyxiation</u>					Unknown
DUE TO IOR AS A CONSEQUENCE OF:					
b. <u>Aspiration of vomitus</u>					Unknown
DUE TO IOR AS A CONSEQUENCE OF:					
c. <u>Alcohol intoxication (0.350 gm percent)</u>					Unknown
DUE TO IOR AS A CONSEQUENCE OF:					
d.					
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I <u>Alcoholic cirrhosis</u>					
28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes					28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) Yes
29. MANNER OF DEATH <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY M	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED
30e. PLACE OF INJURY —At home, farm, street, factory, office building, etc. (Specify)				30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)	

Case No. 9

On March 18, 1989, a 2-month-old male was found dead in his crib. There was no previous illness, and, although autopsy revealed congestion of the lungs, the medical examiner determined that this did not cause the death. Because no other condition could be found that could have led to the death of the infant, the cause of death was determined to be sudden infant death syndrome.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate interval Between Onset and Death
IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Sudden infant death syndrome</u>					Unknown
DUE TO IOR AS A CONSEQUENCE OF:					
b.					
DUE TO IOR AS A CONSEQUENCE OF:					
c.					
DUE TO IOR AS A CONSEQUENCE OF:					
d.					
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					
28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes					28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) Yes
29. MANNER OF DEATH <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY M	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED
30e. PLACE OF INJURY —At home, farm, street, factory, office building, etc. (Specify)				30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)	

Case No. 10

On August 18, 1989, a 32-year-old female was found dead at home. Initial investigation did not reveal cause of death; neither did autopsy or toxicologic examination.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) →		a. <u>Cause of death not determined upon autopsy and</u>			<u>Unknown</u>	
		DUE TO IOR AS A CONSEQUENCE OF:				
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>toxicologic examination</u>			<u>Unknown</u>	
		DUE TO IOR AS A CONSEQUENCE OF:				
		c.				
		DUE TO IOR AS A CONSEQUENCE OF:				
		d.				
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes	
					28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) Yes	
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input checked="" type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY M	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED	
		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify)	30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)			

NOTE: This example is one way in which the medical-legal officer, after reasonable investigation, can indicate that the cause has not been determined. Presumably, such a death certificate would have been initially issued with the term "Pending Investigation" checked in item 29 and, at a later time, the phrase "Could not be Determined" substituted.

Case No. 11

On September 4, 1989, a 50-year-old male was found unconscious in an abandoned house at 4:00 a.m. by police. He was admitted to the hospital where he died at 10:00 a.m. on the same day. Examination on admission to the hospital revealed a large subdural hematoma causing intracerebral hemorrhage. There was a large subgaleal hemorrhage over the area of the subdural hematoma.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) →		a. <u>Intracerebral hemorrhage</u>			<u>Unknown</u>	
		DUE TO IOR AS A CONSEQUENCE OF:				
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>Subdural hematoma</u>			<u>Unknown</u>	
		DUE TO IOR AS A CONSEQUENCE OF:				
		c.				
		DUE TO IOR AS A CONSEQUENCE OF:				
		d.				
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes	
					28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) No	
29. MANNER OF DEATH <input type="checkbox"/> Natural <input checked="" type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year) Sept. 4, 1989	30b. TIME OF INJURY Unknown	30c. INJURY AT WORK? (Yes or no) No	30d. DESCRIBE HOW INJURY OCCURRED Unknown	
		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify) Abandoned House	30f. LOCATION (Street and Number or Rural Route Number, City or Town, State) 3131 Smith Street, Columbus, Alabama			

NOTE: The above certificate was issued before police investigation was completed. After a thorough investigation it could not be determined whether injury was accidental or homicidal. The certificate should be amended in item 29 to "Could not be Determined."

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) →		a. <u>Intracranial bleeding</u> DUE TO IOR AS A CONSEQUENCE OF:			<u>Unknown</u>	
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>Subdural hematoma</u> DUE TO IOR AS A CONSEQUENCE OF:			<u>Unknown</u>	
		c. <u>Blunt injury to top of head</u> DUE TO IOR AS A CONSEQUENCE OF:			<u>Unknown</u>	
		d. _____				
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I.					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) Yes
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input checked="" type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year) <u>Sept. 4, 1989</u>	30b. TIME OF INJURY <u>Unknown</u>	30c. INJURY AT WORK? (Yes or no) No	30d. DESCRIBE HOW INJURY OCCURRED <u>Unknown</u>	
		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify) <u>Abandoned House</u>		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State) <u>3131 Smith Street, Columbus, Alabama</u>		

Case No. 12

On March 4, 1989, a 40-year-old male collapsed at a swimming pool. He had no history of heart problems but had complained 2 days earlier of chest pains and indigestion. Autopsy revealed an acute myocardial infarction due to severe coronary artery disease.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death	
IMMEDIATE CAUSE (Final disease or condition resulting in death) →		a. <u>Acute myocardial infarction</u> DUE TO IOR AS A CONSEQUENCE OF:			<u>minutes</u>	
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>Severe coronary artery disease</u> DUE TO IOR AS A CONSEQUENCE OF:			<u>years</u>	
		c. _____ DUE TO IOR AS A CONSEQUENCE OF:				
		d. _____				
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I.					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes	28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) Yes
29. MANNER OF DEATH <input checked="" type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year)	30b. TIME OF INJURY <u>M</u>	30c. INJURY AT WORK? (Yes or no)	30d. DESCRIBE HOW INJURY OCCURRED	
		30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify)		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)		

Case No. 13

On July 26, 1989, a 32-year-old male was found along a roadway lying in some brambles. He was thrashing about—grinding his teeth. He steadily went into full arrest and later died in the emergency room at a medical center. He had a history of cocaine and cannabis abuse. Toxicologic examination revealed that he died of cocaine toxicity by sniffing cocaine, causing severe pulmonary congestion and edema.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death minutes
IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Severe pulmonary congestion and edema</u> DUE TO IOR AS A CONSEQUENCE OF:		minutes			
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>Cocaine toxicity (cocaine, 2150 ug 12)</u> DUE TO IOR AS A CONSEQUENCE OF:			
		c. _____ DUE TO IOR AS A CONSEQUENCE OF:			
		d. _____ DUE TO IOR AS A CONSEQUENCE OF:			
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I <u>History of cocaine and cannabis abuse</u>					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) Yes
28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no) Yes					
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input checked="" type="checkbox"/> Accident <input type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year) <u>July 26, 1989</u>		30b. TIME OF INJURY (Specify) <u>Unknown p.m.</u>	
		30c. INJURY AT WORK? (Yes or no) No		30d. DESCRIBE HOW INJURY OCCURRED <u>Found thrashing along roadway</u>	
		30e. PLACE OF INJURY —At home, farm, street, factory, office building, etc. (Specify) <u>Unknown</u>		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State) <u>Elm Street, Morton, Illinois</u>	

Case No. 14

On October 1, 1989, at 2:30 p.m., a 22-year-old male was found hanging in the garage at the rear of his residence. He had a history of despondency and drug abuse and was last seen by his mother 30 minutes earlier.

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.					Approximate Interval Between Onset and Death minutes
IMMEDIATE CAUSE (Final disease or condition resulting in death) → a. <u>Asphyxia</u> DUE TO IOR AS A CONSEQUENCE OF:		minutes			
Sequentially list conditions, if any, leading to immediate cause. Enter UNDERLYING CAUSE (Disease or injury that initiated events resulting in death) LAST		b. <u>Hanging</u> DUE TO IOR AS A CONSEQUENCE OF:			
		c. _____ DUE TO IOR AS A CONSEQUENCE OF:			
		d. _____ DUE TO IOR AS A CONSEQUENCE OF:			
PART II. Other significant conditions contributing to death but not resulting in the underlying cause given in Part I _____					28a. WAS AN AUTOPSY PERFORMED? (Yes or no) No
28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)					
29. MANNER OF DEATH <input type="checkbox"/> Natural <input type="checkbox"/> Pending Investigation <input type="checkbox"/> Accident <input checked="" type="checkbox"/> Suicide <input type="checkbox"/> Could not be Determined <input type="checkbox"/> Homicide		30a. DATE OF INJURY (Month, Day, Year) <u>Oct. 1, 1989</u>		30b. TIME OF INJURY (Specify) <u>2:30 p.m.</u>	
		30c. INJURY AT WORK? (Yes or no) No		30d. DESCRIBE HOW INJURY OCCURRED <u>Hanging by rope from rafters</u>	
		30e. PLACE OF INJURY —At home, farm, street, factory, office building, etc. (Specify) <u>Home-garage</u>		30f. LOCATION (Street and Number or Rural Route Number, City or Town, State) <u>217 Kirk Avenue, Peoria, Illinois</u>	

Part III—Completing the death certificate

These instructions pertain to the 1989 revision of the U.S. Standard Certificate of Death. Usually the funeral director completes items 1–22. Under certain circumstances the medical-legal officer may be responsible for completing the entire certificate. Therefore, instructions for completing all items on the certificate are included.

NAME OF DECEDENT: For use by Physician or Institution

The left-hand margin of the certificate contains a line where the physician or hospital can write in the name of the decedent. This allows the hospital to assist in completing the death certificate before the body is removed by the funeral director. However, because the funeral director is responsible for completion of the personal information about the decedent and because the hospital frequently does not have the complete legal name of the decedent, the medical-legal officer should enter the name he or she has for the decedent in this item and the funeral director will then enter the full legal name in item 1.

1. DECEDENT'S NAME (*First, Middle, Last*)

Type or print the full first, middle, and last names of the decedent. Do not abbreviate. Alias or “also known as” names should also be entered above the legal name or in parentheses (e.g., AKA-Smith).

This item is used to identify the decedent.

2. SEX

Enter male or female. Do not abbreviate or use other symbols. If sex cannot be determined after verification with medical records, inspection of the body, or other sources, enter “Unknown.” Do not leave this item blank.

This item aids in the identification of the decedent. It is also used in research and statistical analysis to determine sex-specific mortality rates.

3. DATE OF DEATH (*Month, Day, Year*)

Enter the exact month, day, and year that death occurred.

Enter the full name of the month—January, February, March, etc. Do not use a number or an abbreviation to designate the month.

Pay particular attention to the entry of month, day, or year when the death occurs around midnight or December 31. Consider a death at midnight to have occurred

at the end of one day rather than the beginning of the next. For instance, the date for a death that occurs at midnight on December 31 should be recorded as December 31.

If the exact date of death is unknown, it should be approximated by the person completing the medical certification. “Approx” should be placed before the date.

This item is used in conjunction with the hour of death to establish the exact time of death of the decedent. Epidemiologists also use date of death in conjunction with the cause of death information for research on intervals between injuries, onset of conditions, and death.

4. SOCIAL SECURITY NUMBER

Enter the social security number of the decedent.

This item is useful in identifying the decedent and facilitates the filing of social security claims.

5a–c AGE

Make one entry only in either 5a, 5b, or 5c depending on the age of the decedent.

5a. AGE—Last Birthday (Years)

Enter the decedent’s exact age in years at his or her last birthday.

If the decedent was under 1 year of age, leave this item blank.

5b. UNDER 1 YEAR—Months, Days

Enter the exact age in either months or days at time of death for infants surviving at least 1 month.

If the infant was 1–11 months of age inclusive, enter the age in completed months.

If the infant was less than 1 month old, enter the age in completed days.

If the infant was over 1 year or under 1 day of age, leave this item blank.

5c. UNDER 1 DAY—Hours, Minutes

Enter the exact number of hours or minutes the infant lived for infants who did not survive for an entire day.

If the infant lived 1–23 hours inclusive, enter the age in completed hours.

If the infant was less than 1 hour old, enter the age in minutes.

If the infant was more than 1 day old, leave this item blank.

Information from this item is used to study differences in age-specific mortality and in planning and evaluating public health programs.

6. DATE OF BIRTH (Month, Day, Year)

Enter the exact month, day, and year that the decedent was born.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

This item is useful in identification of the decedent for legal purposes. It also helps verify the accuracy of the “age” item.

7. BIRTHPLACE (*City and State or Foreign Country*)

If the decedent was born in the United States, enter the name of the city and State.

If the decedent was not born in the United States, enter the name of the country of birth whether or not the decedent was a U.S. citizen at the time of death.

If the decedent was born in the United States but the city is unknown, enter the name of the State only. If the State is unknown, enter “U.S.—unknown.”

If the decedent was born in a foreign country but the country is unknown, enter “Foreign—unknown.”

If no information is available regarding place of birth, enter “Unknown.”

This item is used to match birth and death certificates of a deceased individual. Matching these records provides information from the birth certificate that is not contained on the death certificate and may give insight into which conditions led to death. Information from the birth certificate is especially important in examining the causes of infant mortality.

8. WAS DECEDENT EVER IN U.S. ARMED FORCES? (*Yes or no*)

If the decedent ever served in the U.S. Armed Forces, enter “Yes.” If not, enter “No.” If you cannot determine whether the decedent served in the U.S. Armed Forces, enter “Unknown.” Do not leave this item blank.

This item is used to identify decedents who were veterans. This information is of interest to veteran groups.

9a–d PLACE OF DEATH

9a. PLACE OF DEATH (*Check only one*)

HOSPITAL:

☐ Inpatient ☐ ER/Outpatient ☐ DOA

OTHER:

☐ Nursing Home ☐ Residence ☐ Other (*Specify*) _____

Check the type of place where the decedent was pronounced dead.

If the decedent was pronounced dead in a hospital, check the box indicating the decedent’s status at the hospital: Inpatient, ER (emergency room)/Outpatient, or DOA (dead on arrival).

If the decedent was pronounced dead somewhere else, check the box indicating whether pronouncement occurred at a nursing home, residence, or other location. If death was pronounced at a licensed long-term care facility that is not a hospital (for example, nursing home, convalescent home, or old age home), check the box that indicates

nursing home. If death was pronounced at a licensed ambulatory/surgical center or birthing center, check “Other (Specify).” If “Other (Specify)” is checked, specify where death was legally pronounced, such as a physician’s office, the highway where a traffic accident occurred, a vessel, or at work. If the decedent’s body was found, the place where the body was found should be entered as the place of death.

9b. FACILITY NAME *(If not institution, give street and number)*

Hospital deaths

If the death occurred in a hospital, enter the full name of the hospital.

If death occurred en route to or on arrival at a hospital, enter the full name of the hospital. Deaths that occur in an ambulance or emergency squad vehicle en route to a hospital fall in this category.

Nonhospital deaths

If the death occurred at home, enter the house number and street name.

If the death occurred at some place other than those described above, enter the number and street name of the place.

If the death occurred on a moving conveyance, enter the name of the vessel, for example, “S.S. Emerald Seas (at sea)” or “Eastern Airlines Flight 296 (in flight).”

9c. CITY, TOWN, OR LOCATION OF DEATH

Enter the name of the city, town, village, or location where death occurred.

9d. COUNTY OF DEATH

Enter the name of the county where death occurred.

If the death occurred on a moving conveyance in the United States and the body was first removed from the conveyance in this State, complete a death certificate and enter as the place of death the address where the body was first removed from the conveyance.

If the death occurred on a moving conveyance in international waters, international airspace, or in a foreign country or its airspace, and the body was first removed from the conveyance in this State, register the death in this State but enter the *actual* place of death insofar as it can be determined.

Information on place of death is needed to determine who has jurisdiction for deaths that legally require investigation by a medical examiner or coroner. These items are also used for research and statistics comparing hospital and nonhospital deaths. Valuable information is also provided for health planning and research on the utilization of health facilities.

10. MARITAL STATUS—Married, Never Married, Widowed, Divorced *(Specify)*

Enter the marital status of the decedent at time of death. Specify one of the following: Married, never married, widowed, or divorced. A person is legally married even if separated. A person is no longer legally married when the divorce papers are signed by a judge.

If marital status cannot be determined, enter “Unknown.” Do not leave this item blank.

This information is used in determining differences in mortality by marital status.

11. SURVIVING SPOUSE *(If wife, give maiden name)*

If the decedent was married at the time of death, enter the full name of the surviving spouse.

If the surviving spouse is the wife, enter her full maiden name.

This item is used in genealogical studies and in establishing proper insurance settlement and other survivor benefits.

12a–b OCCUPATION AND INDUSTRY OF DECEDENT

These items are to be completed for all decedents 14 years of age and over. Enter the information even if the decedent was retired, disabled, or institutionalized at the time of death.

12a. DECEDENT’S USUAL OCCUPATION *(Give kind of work done during most of working life. Do not use retired.)*

Enter the usual occupation of the decedent. This is not necessarily the last occupation of the decedent. “Usual occupation” is the kind of work the decedent did during most of his or her working life, such as claim adjuster, farmhand, coal miner, janitor, store manager, college professor, or civil engineer. Never enter “Retired.”

If the decedent was a homemaker at the time of death but had worked outside the household during his or her working life, enter that occupation. If the decedent was a “homemaker” during most of his or her working life, and never worked outside the household, enter “Homemaker.” Enter “Student” if the decedent was a student at the time of death and was never regularly employed or employed full time during his or her working life.

12b. KIND OF BUSINESS/INDUSTRY

Enter the kind of business or industry to which the occupation listed in item 12a is related, such as insurance, farming, coal mining, hardware store, retail clothing, university, or government. Do not enter firm or organization names.

If the decedent was a homemaker during his or her working life, and “Homemaker” is entered as the decedent’s usual occupation in item 12a, enter “Own home” or “Someone else’s home,” whichever is appropriate.

If the decedent was a student at the time of death and “Student” is entered as the decedent’s usual occupation in item 12a, enter the type of school, such as high school or college, in item 12b.

These items are useful in studying occupationally related mortality and in identifying job-related risk areas. For example, correlating asbestos used in particular occupations in the shipbuilding industry to respiratory cancer was possible with this information. If you have questions about what classification to use for a decedent’s occupation or industry, refer to the handbook Guidelines for Reporting Occupation and Industry on Death Certificates.

13a–f RESIDENCE OF DECEDENT

The residence of the decedent is the place where his or her household is located. This is not necessarily the same as “home State,” “voting residence,” “mailing address,” or “legal residence.” The State, county, city, and street address should be for the place where the decedent actually lived most of the time. Never enter a temporary residence, such as one used during a visit, business trip, or a vacation. However, place of residence during a tour of military duty or during attendance at college is *not* considered temporary and should be entered as the place of residence on the certificate.

If a decedent had been living in a facility where an individual usually resides for a long period of time, such as a group home, mental institution, nursing home, penitentiary, or hospital for the chronically ill, this facility should be entered as the place of residence in items 13a through 13f.

If the decedent was a child, residence is the same as that of the parent(s), legal guardian, or custodian unless the child was living in an institution where individuals usually reside for long periods of time, as indicated above. In those instances the residence of the child is shown as the facility.

If the decedent was an infant who never resided at home, the place of residence is that of the mother or legal guardian. Do *not* use an acute care hospital as the place of residence for any infant.

13a. RESIDENCE—STATE

Enter the name of the State in which the decedent lived. This may differ from the State in the mailing address. If the decedent was not a resident of the United States, enter the name of the country and the name of the unit of government that is the nearest equivalent of a State.

13b. RESIDENT—COUNTY

Enter the name of the county in which the decedent lived.

13c. RESIDENCE—CITY, TOWN, OR LOCATION

Enter the name of the city, town, or location in which the decedent lived. This may differ from the city, town, or location used in the mailing address.

13d. RESIDENCE—STREET AND NUMBER

Enter the number and street name of the place where the decedent lived.

If this place has no number and street name, enter the Rural Route number or box number.

13e. RESIDENCE—INSIDE CITY LIMITS? (*Yes or no*)

Enter “Yes” if the location entered in 13c is incorporated and if the decedent’s residence is inside its boundaries. Otherwise enter “No.”

13f. RESIDENCE—ZIP CODE

Enter the ZIP Code of the place where the decedent lived. This may differ from the ZIP Code used in the mailing address.

Mortality data by residence are used with population data to compute death rates for detailed geographic areas. These data are important in environmental studies. Data on deaths by place of residence of the decedent are also used to prepare population estimates and projections. Local officials use this information to evaluate the availability and use of services in their area. Information on residence inside city limits is used to properly assign events within a county. Information on ZIP Code and whether the decedent lived inside city limits is valuable for studies of deaths for small areas.

14. WAS DECEDENT OF HISPANIC ORIGIN? (Specify No or Yes—If yes, specify Cuban, Mexican, Puerto Rican, etc.)

☐ No ☐ Yes Specify:

Check “No” or “Yes.” If “Yes” is checked, enter the specific Hispanic group. Item 14 should be checked on all certificates. Do not leave this item blank. The entry in this item should reflect the response of the informant.

For the purposes of this item, “Hispanic” refers to people whose origins are from Spain, Mexico, or the Spanish-speaking countries of Central or South America. Origin can be viewed as the ancestry, nationality, lineage, or country in which the person or his or her ancestors were born before their arrival in the United States.

There is no set rule as to how many generations are to be taken into account in determining Hispanic origin. A person’s Hispanic origin may be reported based on the country of origin of a parent, a grandparent, or some far-removed ancestor. The response should reflect what the decedent considered himself or herself to be and should not be based on percentages of ancestry. If the decedent was a child, the parent(s) should determine the Hispanic origin based on their own origin. Although the prompts include the major Hispanic groups of Cuban, Mexican, and Puerto Rican, other Hispanic groups should also be identified in the space provided.

If the informant reports that the decedent was of multiple Hispanic origin, enter the origins as reported (for example, Mexican-Puerto Rican).

If an informant identifies the decedent as Mexican-American or Cuban-American, enter the Hispanic origin as stated.

This item is not a part of the Race item. A decedent of Hispanic origin may be of any race. Each question, Race and Hispanic origin, should be asked independently.

Hispanics comprise the second largest ethnic minority in this country. Reliable data are needed to identify and assess public health problems of Hispanics and to target efforts to their specific needs. Information from item 14 will permit the production of mortality data for the Hispanic community.

Some States have a very small Hispanic population and may wish to obtain data on other groups. Therefore, they may opt to include a general Ancestry item on their certificate instead of a specific Hispanic origin item. Instructions for the general Ancestry item follow:

ANCESTRY—Mexican, Puerto Rican, Cuban, African, English, Irish-German, Hmong, etc. (Specify)

Enter the ancestry of the decedent as obtained from the informant. This item should be completed on all certificates. Do not leave this item blank. The entry should reflect the response of the informant.

For the purposes of this item, ancestry refers to the nationality, lineage, or country in which the decedent or the decedent's ancestors were born before their arrival in the United States. American Indian and Alaska Native should be entered as such.

There is no set rule as to how many generations are to be taken into account in determining ancestry. A decedent's ancestry may be reported based on the country of origin of a parent, grandparent, or some far-removed ancestor. The response should reflect what the decedent considered himself or herself to be, and should not be based on percentages of ancestry. If the decedent was a child, the parent(s) should determine the ancestry based on their own ancestry.

Some persons may not have identified with the foreign birthplace of their ancestors or with a nationality group, and the informant may report "American." If, after clarification of the intent of this item, the informant still feels that the decedent was "American," enter "American" on the record.

If the informant indicates that the decedent was of multiple ancestry, enter the ancestry as reported (for example, English-Scottish-Irish, Mexican-American).

If a religious group is reported—such as Jewish, Moslem, or Protestant—ask for the country of origin or nationality.

This item is not a part of the Race item. Both questions, Race and Ancestry, should be asked independently. This means that for certain groups, the entry will be the same in both items—such as Japanese, Chinese, or Hawaiian. Even if they are the same, the entry should be made in both items. However, an entry of "Black" or "White" should never be recorded in the ancestry item.

15. RACE—American Indian, Black, White, etc. (Specify)

Enter the race of the decedent as stated by the informant.

For Asians and Pacific Islanders, enter the national origin of the decedent, such as Chinese, Japanese, Korean, Filipino, or Hawaiian.

If the informant indicates that the decedent was of mixed race, enter both races or ancestries.

Race is essential for identifying specific mortality patterns and leading causes of death among different racial groups. It is also used to determine whether specific health programs are needed in particular areas, as well as to make population estimates.

**16. DECEDENT'S EDUCATION (Specify only highest grade completed)
Elementary/Secondary (0–12)—College (1–4 or 5+)**

Enter the highest number of years of regular schooling completed by the decedent in either the space for elementary/secondary school or the space for college. An entry

should be made in only one of the spaces. The other space should be left blank. Report only those years of school that were completed. A person who enrolls in college but does not complete one full year should not be identified with any college education in this item.

Count formal schooling. Do not include beauty, barber, trade, business, technical, or other special schools when determining the highest grade completed.

This item is used in studies of the relationship between education and mortality and provides an indicator of socioeconomic status, which is also closely associated with mortality. This information is valuable in medical studies of causes of death and in prevention programs.

17–18 PARENTS

17. FATHER'S NAME *(First, Middle, Last)*

Type or print the first, middle, and last name of the father of the decedent.

18. MOTHER'S NAME *(First, Middle, Maiden Surname)*

Type or print the first, middle, and maiden surname of the mother of the decedent. This is the name given at birth or adoption, not a name acquired by marriage.

The names of the decedent's mother and father aid in identification of the decedent's record. The maiden surname is important for matching the record with other records because it remains constant throughout a lifetime in contrast to other names which may change because of marriage or divorce. These items are also of importance in genealogical studies.

19a–b INFORMANT

19a. INFORMANT'S NAME *(Type/Print)*

Type or print the name of the person who supplied the personal facts about the decedent and his or her family.

19b. MAILING ADDRESS *(Street and Number or Rural Route Number, City or Town, State, ZIP Code)*

Enter the complete mailing address of the informant whose name appears in item 19a. Be sure to include the ZIP Code.

The name and mailing address of the informant are used to contact the informant when inquiries must be made to correct or complete any items on the death certificate.

20a–c DISPOSITION

20a. METHOD OF DISPOSITION

- ☐ Burial ☐ Cremation ☐ Removal from State ☐ Donation
☐ Other (Specify) _____

Check the box corresponding to the method of disposition of the decedent's body. If "Other (Specify)" is checked, enter the method of disposition on the line provided (for example, "Entombment").

If the body is to be used by a hospital or a medical or mortuary school for scientific or educational purposes, enter "Donation" and specify the name and location of the institution in items 20b and 20c. "Donation" refers only to the entire body, not to individual organs.

20b. PLACE OF DISPOSITION (*Name of cemetery, crematory, or other place*)

Enter the name of the cemetery, crematory, or other place of disposition.

If the body is removed from the State, specify the name of the cemetery, crematory, or other place of disposition to which the body is removed.

If the body is to be used by a hospital or medical or mortuary school for scientific or educational purposes, give the name of that institution.

20c. LOCATION—City or Town, State

Enter the name of the city, town, or village and the State where the place of disposition is located.

If the body of the decedent is to be used by a hospital or medical or mortuary school for scientific or educational purposes, enter the name of the city, town, or village and the State where the institution is located.

If there is any question about how to record the place of disposition contact your State or local registrar.

This information indicates whether the body was properly disposed of as required by law. It also serves to locate the body in case exhumation, autopsy, or transfer is required later.

21–22 FUNERAL SERVICE LICENSEE/FACILITY

21a. SIGNATURE OF FUNERAL SERVICE LICENSEE OR PERSON ACTING AS SUCH

The funeral service licensee or other person first assuming custody of the body and charged with the responsibility for completing the death certificate should sign in permanent black ink. Rubber stamps or facsimile signatures are not permitted.

21b. LICENSE NUMBER (*of Licensee*)

Enter the personal State license number of the funeral service licensee. If some other person who is not a licensed funeral director assumes custody of the body, identify

the category of the license and corresponding State license number, or, if the individual possesses no license at all, enter "None."

22. NAME AND ADDRESS OF FACILITY

Enter the name and complete address of the facility handling the body prior to burial or other disposition.

These items assist in quality control in filling out and filing death certificates. They identify the person who is responsible for filing the certificate with the registrar.

23a–c PRONOUNCING PHYSICIAN ONLY

Items 23–26 allow a hospital physician to certify to only the fact and time of death so the body can be released to the funeral director if the attending physician is not available. The attending physician is still responsible for completing the cause of death section (item 27). The pronouncing physician is the person who determines that the decedent is legally dead but who was not in charge of the patient's care for the illness or condition that resulted in death. Items 23a–c are to be completed *only* when the physician responsible for completing the medical certification of cause of death is not available at the time of death to certify the cause of death. The pronouncing physician is responsible for completing items 23 through 26 only.

COMPLETE ITEMS 23a–c ONLY WHEN CERTIFYING PHYSICIAN IS NOT AVAILABLE AT TIME OF DEATH TO CERTIFY CAUSE OF DEATH

23a. TO THE BEST OF MY KNOWLEDGE, DEATH OCCURRED AT THE TIME, DATE, AND PLACE STATED

Signature and Title

Obtain the signature in permanent black ink and the degree or title of the physician who pronounces death. This physician certifies to the time, date, and place of death only. Rubber stamps or facsimile signatures are not permitted.

23b. LICENSE NUMBER

Enter the State license number of the physician who pronounces death.

23c. DATE SIGNED (Month, Day, Year)

Enter the exact month, day, and year that the pronouncing physician signs the certificate. Do not use a number to designate the month.

If the attending physician is available to certify the fact of death, items 23a–c should not be completed; if available, the attending physician should complete items 24–26, 31a–d, and 32 as both pronouncing and certifying physician.

This information is useful for the quality control program because it indicates that the medical certification was provided by the attending physician.

Items 24–26 must be completed by the person who pronounces death—the pronouncing physician, pronouncing/certifying physician, or medical examiner/coroner.

24. TIME OF DEATH

Enter the exact time of death (hours and minutes) according to local time. If daylight saving time is the official prevailing time where death occurs, it should be used to record the time of death. Be sure to indicate whether the time of death is a.m. or p.m.

Enter 12 noon as “12 noon.” One minute after 12 noon is entered as “12:01 p.m.”

Enter 12 midnight as “12 mid.” A death that occurs at 12 midnight belongs to the night of the previous day, not the start of the new day. One minute after 12 midnight is entered as “12:01 a.m.” of the new day.

If the exact time of death is unknown, the time should be approximated by the person who pronounces the body dead. “Approx.” should be placed before the time.

This item establishes the exact time of death, which is important in inheritance cases when there is a question of who died first. This is often important in the case of multiple deaths in the same family.

25. DATE PRONOUNCED DEAD (Month, Day, Year)

Enter the exact month, day, and year that the decedent was pronounced dead.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

This is used to identify the date the decedent was legally pronounced dead. This information is very helpful in those cases where a body of a person who has been dead for some time is found and the death is pronounced by a medical examiner or coroner.

The medical examiner or coroner is not responsible for completing item 26.

26. WAS CASE REFERRED TO MEDICAL EXAMINER/CORONER?

(Yes or no)

Enter “Yes” if the medical examiner or coroner was contacted in reference to this case. Otherwise, enter “No.” Do not leave this item blank.

In cases of accident, suicide, or homicide, the medical examiner or coroner *must* be notified.

This item records whether the medical examiner or coroner was informed when the circumstances required such action. The physician must ensure that necessary referrals are made.

27. CAUSE OF DEATH

Detailed instructions for this item, together with case records, are contained in Part II of this handbook.

These items are to be completed by the attending physician or medical examiner/coroner certifying to the cause of death.

Part I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.

27a. IMMEDIATE CAUSE—(Final disease or condition resulting in death)—Approximate Interval Between Onset and Death

27b., 27c., and 27d. DUE TO (OR AS A CONSEQUENCE OF)—Sequentially list conditions, if any, leading to immediate cause. Enter **UNDERLYING CAUSE** (Disease or injury that initiated events resulting in death) **LAST**.—Approximate Interval Between Onset and Death

The cause of death means the disease, abnormality, injury, or poisoning that caused the death, *not* the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure.

In **Part I**, the immediate cause of death is reported on line (a). Antecedent conditions, if any, which gave rise to the cause are reported on lines (b), (c), and (d). The underlying cause should be reported on the last line used in **Part I**. No entry is necessary on lines (b), (c), and (d) if the immediate cause of death on line (a) describes completely the sequence of events. **ONLY ONE CAUSE SHOULD BE ENTERED ON A LINE.**

Additional lines may be added if necessary. Provide the best estimate of the interval between the onset of each condition and death. Do not leave the space for the interval blank; if unknown, so specify.

Part II. *Other significant conditions* contributing to death but not resulting in the underlying cause given in **Part I**.

In *Part II*, enter other important diseases or conditions that contributed to death but did not result in the underlying cause of death given in **Part I**.

Cause of death is the most important statistical and research item on the death certificate. It provides medical information that serves as a basis for describing trends in human health and mortality and for analyzing the conditions leading to death. Mortality statistics provide a basis for epidemiological studies that focus on leading causes of death by age, race, and sex (for example, AIDS, heart disease, and cancer). They also provide a basis for research in disease etiology and diagnostic techniques, which in turn lead to improvements in patient care.

28a. WAS AN AUTOPSY PERFORMED? (*Yes or no*)

Enter “Yes” if a partial or complete autopsy was performed. Otherwise, enter “No.”

An autopsy is important in giving additional insight into the conditions that lead to death. This additional information is particularly important in arriving at the immediate and underlying causes in violent deaths.

28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (*Yes or no*)

Enter “Yes” if the autopsy findings were available and used to determine the cause of death. Otherwise, enter “No.” If no autopsy was performed, leave this item blank.

This information assists in determining whether, for the 10–15 percent of cases for which an autopsy is done, the information was used to assist in determining the cause

of death. Knowing whether the autopsy results were used in determining the cause of death gives insight into the quality of the cause-of-death data.

29. MANNER OF DEATH

- | | |
|-----------------------------------|--|
| <input type="checkbox"/> Natural | <input type="checkbox"/> Pending Investigation |
| <input type="checkbox"/> Accident | |
| <input type="checkbox"/> Suicide | <input type="checkbox"/> Could not be Determined |
| <input type="checkbox"/> Homicide | |

Complete this item for all deaths. Check the box corresponding to the manner of death. Deaths not due to external causes should be identified as “Natural.” Usually, these are the only types of deaths a physician will certify. “Pending investigation” and “Could not be Determined” refer to medical examiner or coroner cases only. “Could not be Determined” should only be checked after a postmortem examination has been completed and the manner of death is still unknown.

In cases of accidental death this information is used to justify the payment of double indemnity on life insurance policies. It is also used to obtain a more accurate determination of cause of death.

If the manner of death checked in item 29 was anything other than natural, items 30a–f must be completed.

30a–f ACCIDENT OR INJURY

Complete these items in cases where violence caused or contributed to the death. Usually, deaths resulting from violence are certified by a medical examiner or coroner. However, there may be instances in which a medical examiner or coroner will not assume jurisdiction and the attending physician will certify to an accidental death. In these cases, when the manner of death is anything other than natural, the attending physician is to complete items 30a–f.

30a. DATE OF INJURY (*Month, Day, Year*)

Enter the exact month, day, and year that the injury occurred. Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

The date of injury may not necessarily be the same as the date of death.

30b. TIME OF INJURY

Enter the exact time (hours and minutes) that the injury occurred. Use prevailing local time. In cases in which the exact time is impossible to determine, an estimate should be made. Be sure to indicate whether the time of injury was a.m. or p.m.

30c. INJURY AT WORK? (*Yes or no*)

Enter “Yes” if the injury occurred while the decedent was at work (for example, if the decedent was on an assembly line while in a factory or a salesperson driving to meet a customer). If not, enter “No.” If this cannot be determined, enter “Unknown.”

30d. DESCRIBE HOW INJURY OCCURRED

Briefly and clearly describe how the injury occurred, explaining the circumstances or cause of the accident or injury, such as “fell off ladder while painting house,” “ran off roadway,” or “car-truck collision.” For motor vehicle accidents, indicate whether the decedent was a driver, passenger, or pedestrian.

30e. PLACE OF INJURY—At home, farm, street, factory, office building, etc. (Specify)

Enter the general category of the place where the injury occurred. Do not enter firm or organization names, just the general category for the place of injury, such as loading platform, office building, or baseball field.

30f. LOCATION (Street and Number or Rural Route Number, City or Town, State)

Enter the complete address where the injury took place.

In cases of accidental death, these items are used in justifying the payment of double indemnity on life insurance policies. They are also needed for a more accurate determination of causes of death. Information from these items forms the basis of statistical studies of occupational injuries.

31a—d CERTIFIER

31a. CERTIFIER OF CAUSE OF DEATH (Check only one)

- ☐ **CERTIFYING PHYSICIAN** (Physician certifying cause of death when another physician has pronounced death and completed item 23).

“To the best of my knowledge, death occurred due to the cause(s) and manner as stated.”

The **CERTIFYING PHYSICIAN** is the person who determines the cause of death (item 27). This box should be checked only in those cases in which the person completing the medical certification of cause of death is not the person who pronounced death (item 23). The certifying physician is responsible for completing items 27 through 32.

- ☐ **PRONOUNCING AND CERTIFYING PHYSICIAN** (Physician both pronouncing death and certifying to cause of death).

“To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner as stated.”

The **PRONOUNCING AND CERTIFYING PHYSICIAN** box should be checked when the same person is responsible for completing items 24 through 32, that is, when the same physician has both pronounced death and certified to the cause of death. If this box is checked, items 23a through 23c should be left blank.

- ☐ **MEDICAL EXAMINER/CORONER**

“On the basis of examination and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner as stated.”

The **MEDICAL EXAMINER/CORONER** box should be checked when investigation is required by the Post Mortem Examination Act and the cause of death is completed

by a medical examiner or coroner. The medical examiner/coroner is responsible for completing items 24 through 32.

If the attending physician is available to certify the fact of death, items 23a–c should not be completed; the attending physician should then complete items 24–29, 31a–d, and 32 as both pronouncing and certifying physician.

The two-physician certifier concept is optional and allows a hospital physician to certify to only the fact and time of death so the body can be released to the funeral director. The attending physician should complete the cause-of-death section. This certification method should result in improved data on cause of death because the physician having the most knowledge about the case completes the cause-of-death section.

31b. SIGNATURE AND TITLE OF CERTIFIER

The physician who certifies to the cause of death in item 31a signs the certificate in permanent black ink. The degree or title of the physician should also be indicated. Rubber stamps or facsimile signatures are not permitted.

31c. LICENSE NUMBER

Enter the State license number of the physician who signs the certificate in item 31b.

This number assists in State quality control programs when it is necessary to contact the certifier for additional information concerning the death.

31d. DATE SIGNED (Month, Day, Year)

Enter the exact month, day, and year that the certifier signed the certificate.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

These items are of legal value in attesting that the medical certification was completed and signed within the time limit required by statute.

32. NAME AND ADDRESS OF PERSON WHO COMPLETED THE CAUSE OF DEATH (ITEM 27) (Type/Print)

Type or print the full name and address of the person whose signature appears in item 31b.

This information is used by the State office of vital statistics for querying the certifier when a question about cause of death arises.

33—34 REGISTRAR

33. REGISTRAR'S SIGNATURE

The registrar signs the certificate when it is filed and accepted.

This documents that the certificate was filed and accepted by the registrar.

34. DATE FILED (Month, Day, Year)

The registrar enters the date that the certificate is filed.

The date documents whether the death certificate was filed within the time period specified by law.

Part IV—Completing the cause of fetal death

The primary responsibility of the medical examiner or coroner whose name appears in item 30 of the Fetal Death Report is to complete the cause-of-fetal-death section. In addition to entering information on the causes of fetal death, this person should also see that the date and place of fetal death are correctly entered. He or she should also check the medical and health information in the report.

Cause of fetal death

A facsimile of the section on cause-of-fetal-death of the fetal death report is shown below. It is similar to the cause-of-death section on the U.S. Standard Certificate of Death. As such, it is designed to facilitate the reporting of the causes of fetal death and places upon the medical examiner or coroner the responsibility for indicating the course of events leading to the fetal death. He or she is the best person to decide which of several conditions was directly responsible for the fetal death and what antecedent conditions, if any, gave rise to the immediate cause. For statistical and research purposes, it is important that the reporting of the medical information on the fetal death report be specified as precisely as possible.

28.		Enter only one cause per line for a, b, and c	
PART I. Fetal or maternal condition directly causing fetal death.	{	IMMEDIATE CAUSE	Specify Fetal or Maternal
		a. DUE TO (OR AS A CONSEQUENCE OF):	Specify Fetal or Maternal
		b. DUE TO (OR AS A CONSEQUENCE OF):	Specify Fetal or Maternal
		c. _____	Specify Fetal or Maternal
Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last			
PART II. Other significant conditions of fetus or mother contributing to fetal death but not resulting in the underlying cause given in Part I		29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)	

As can be seen, the section on cause of fetal death consists of two parts. Part I is for reporting the sequence of events leading to the fetal death, proceeding backward from the immediate cause of fetal death. In Part II, other significant contributory conditions to the fetal death are reported. In reporting the causes of fetal death, conditions in the fetus or mother, or of the placenta, cord, or membranes, should be reported if they are believed to have adversely affected the fetus. Cause of fetal death should

include information provided from tissue analysis, autopsy, or any other type of postmortem examination. If microscopic examinations for a fetal death are still pending at the time the report is filed, the additional information should be reported to the registrar as soon as it is available. If you have any questions about the procedures for doing this, contact your registrar.

Part I of the cause of fetal death

Only one cause is to be entered on each line of Part I. Additional lines should be added between the printed lines when necessary. For each cause, indicate in the space provided at the end of the line whether the condition was fetal or maternal. The underlying cause of fetal death should be entered on the lowest line used in Part I. The underlying cause of fetal death is the condition that started the sequence of events between the normal health of the mother or fetus and the immediate cause of the fetal death.

Line (a) immediate cause

In Part I, the immediate cause of fetal death is reported on line (a). This is the fetal or maternal disease or condition directly causing the fetal death. An immediate cause of fetal death must always be reported and entered on line (a). It can be the sole entry in the cause-of-fetal-death section if that condition was the only condition causing the fetal death.

Lines (b) and (c) due to (or as a consequence of)

On line (b) report the disease, injury, or complication, if any, that gave rise to the immediate cause of fetal death. If this in turn resulted from another condition, record that condition on line (c). The underlying cause of fetal death should be reported on the lowest line used in Part I.

The words “due to (or as a consequence of),” which are printed between the lines of Part I, apply not only to sequences with an etiological or pathological basis but also to sequences in which an antecedent condition is believed to have prepared the way for the more immediate cause by damage to tissues or impairment of function.

If an accident, poisoning, or violence to the mother caused death to the fetus, a brief description of the external cause should be entered on the line immediately below the description of the type of injury or poisoning. For example, the completed cause of fetal death below indicates asphyxia to the fetus due to a homicide by stabbing of the mother.

28. PART I. Fetal or maternal condition directly causing fetal death.

Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last.

IMMEDIATE CAUSE

a. Asphyxia

b. Homicide by Stabbing

c. _____

Specify Fetal or Maternal

Fetal

Specify Fetal or Maternal

Maternal

Specify Fetal or Maternal

PART II. Other significant conditions of fetus or mother contributing to fetal death but not resulting in the underlying cause given in Part I.

29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)

Before labor

If the immediate cause of fetal death arose as a complication of, or from an error or accident in surgery, or other procedure or treatment, enter this on the line below the immediate cause with a note of the circumstances and the condition for which the procedure or other treatment was being carried out.

Specify fetal or maternal

Space is provided at the end of each line in Part I for recording whether the condition was fetal or maternal. This should be entered for *all* conditions.

Part II of the cause of fetal death (other significant conditions)

Recorded on these lines are all other important diseases or conditions in the fetus or mother that were present at the time of fetal death, and that may have contributed to the fetal death but did not result in the underlying cause of fetal death listed in Part I.

Supplemental report of cause of fetal death

In many instances, information on the cause of fetal death may be pending further study of tissue or autopsy results or a pathology report. When additional information is obtained, the medical examiner or coroner should file a supplemental report of cause of fetal death.

Other items for medical certification

Additional information required from the medical examiner or coroner includes a clinical estimate of gestation (item 21) and whether the fetus died before labor or during labor or delivery (item 29). In addition, some of the medical and health information (items 15–27) should be completed or checked for accuracy. These items request information on risk factors for the pregnancy, obstetric procedures used, complications of labor or delivery, method of delivery, and congenital anomalies of the fetus.

Examples of reporting cause of fetal death

Case History No. 1

The mother was a 29-year-old gravida 1, para 0 woman with a history of drug abuse. She had a normal pregnancy until 28 weeks' gestation when hydramnios was noted. Ultrasonography suggested anencephaly. No fetal movement was noted, nor were fetal

heart sounds audible. Labor was induced, and a stillborn anencephalic fetus weighing 1,100 grams was delivered.

CAUSE OF FETAL DEATH

28. <small>Enter only one cause per line for a, b, and c.</small>		
PART I. Fetal or maternal condition directly causing fetal death.	IMMEDIATE CAUSE	Specify Fetal or Maternal
	a. <u>Anencephaly</u>	<u>Fetal</u>
	DUE TO IOR AS A CONSEQUENCE OF:	Specify Fetal or Maternal
Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last.	b. _____	Specify Fetal or Maternal
	DUE TO IOR AS A CONSEQUENCE OF:	Specify Fetal or Maternal
	c. _____	
PART II. Other significant conditions of fetus or mother contributing to fetal death but not resulting in the underlying cause given in Part I		29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)
<u>Maternal drug use</u>		
		Before labor

Note: The drug(s) should be specified when known.

Case History No. 2

The mother had a normal pregnancy until 28 weeks' gestation when she noticed the absence of fetal movement which was confirmed by ultrasound. There were no audible fetal heart sounds. Labor was induced and the mother was delivered of a 900-gram fetus, apparently female, delivered after prostaglandin.

The facies was abnormal with depressed nasal bridge, anteverted nostrils, small mouth, small posteriorly rotated ears, and midline frontal bossing. There was an umbilical hernia and a sacral neural tube defect (meningocele). The external genitalia were ambiguous. There was syndactyly of toes 2 + 3, and rockerbottom feet bilaterally. The fingers were short and edematous; there were no flexion creases on the palms of either hand.

Gross autopsy revealed internally that the genitalia were those of a normal male. The adrenals were small. There were several accessory spleens, partial malrotation of the gut, and an atrial septal defect. The placenta had trophoblastic cysts. Tissues (muscle and fetal membranes) were taken for future chromosome analysis.

CAUSE OF FETAL DEATH

28. <small>Enter only one cause per line for a, b, and c.</small>		
PART I. Fetal or maternal condition directly causing fetal death.	IMMEDIATE CAUSE	Specify Fetal or Maternal
	a. <u>Probable chromosome anomaly-pending cytogenetics</u>	
	DUE TO IOR AS A CONSEQUENCE OF:	Specify Fetal or Maternal
Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last.	b. <u>report</u>	Specify Fetal or Maternal
	DUE TO IOR AS A CONSEQUENCE OF:	Specify Fetal or Maternal
	c. _____	
PART II. Other significant conditions of fetus or mother contributing to fetal death but not resulting in the underlying cause given in Part I		29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)
		Before labor

Two weeks later a chromosome analysis report became available that provided a diagnosis of triploidy, karyotype 69, XXY. A supplemental report of cause of fetal death was filed with the registrar of vital statistics.

CAUSE OF
FETAL
DEATH

28.		Enter only one cause per line for a, b, and c.	
PART I. Fetal or maternal condition directly causing fetal death.	{	IMMEDIATE CAUSE	
		a. Triploidy syndrome, karyotype 69,XXY	Specify Fetal or Maternal Fetal
		DUE TO IOR AS A CONSEQUENCE OF:	Specify Fetal or Maternal
		b.	
Fetal and/or maternal conditions, if any, giving rise to the immediate cause(s), stating the underlying cause last	{	DUE TO IOR AS A CONSEQUENCE OF:	Specify Fetal or Maternal
		c.	
PART II. Other significant conditions of fetus or mother contributing to fetal death but not resulting in the underlying cause given in Part I.		29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)	
<div></div>		Before labor	

Part V—Completing the report of fetal death

These instructions pertain to the 1989 revision of the U.S. Standard Report of Fetal Death. Although the hospital usually completes the report, under certain circumstances the medical-legal officer may be responsible for completing it. Therefore, instructions for completing all items on the report are included.

1a—c PLACE OF DELIVERY

1. FACILITY NAME *(If not institution, give street and number)*

Enter the full name of the hospital, free standing birthing center, or other facility where the delivery occurred.

If the delivery occurred on a moving conveyance en route to or on arrival at a facility, enter the full name of the facility followed by “En route.”

If the delivery occurred at home, enter the house number and street name of the place where delivery occurred.

If the delivery occurred at some place other than those described above, enter the number and street name of the location.

If the delivery occurred on a moving conveyance that was not en route to a facility, enter as the place of delivery the address where the fetus was first removed from the conveyance.

2. CITY, TOWN, OR LOCATION OF DELIVERY

Enter the name of the city, town, village, or location where the delivery occurred. For deliveries occurring on a moving conveyance, enter the city, town, village, or location where the fetus was first removed from the conveyance.

If a dead fetus is found in this State and the place of fetal death is unknown, the fetal death should be registered in this State. The place where the fetus was found should be considered the place of fetal death.

3. COUNTY OF DELIVERY

Enter the name of the county where the delivery occurred. For deliveries occurring on a moving conveyance, enter the county where the fetus was first removed from the conveyance.

Items 1–3 identify the place of delivery, which is used to study relationships of hospital and nonhospital pregnancy terminations. It is also used by many States to produce statistical data by specific facility. Information on place of delivery, together with residence information, provides data to evaluate the utilization and distribution of health services.

4. DATE OF DELIVERY (*Month, Day, Year*)

Enter the exact month, day, and year the fetus was delivered.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

Pay particular attention to the entry of month, day, or year when the delivery occurs around midnight or on December 31. Consider a delivery at midnight to have occurred at the end of one day rather than the beginning of the next day.

This item is used in conjunction with date last normal menses began to calculate length of gestation, which is an essential element in the study of low-birth-weight deliveries.

5. SEX OF FETUS

Enter male, female, or undetermined. Do not abbreviate or use other symbols. Do not leave this item blank.

This information is used to measure fetal and perinatal mortality by sex. It helps identify differences in the impact of environmental and biological factors between the sexes.

6a. MOTHER'S NAME (*First, Middle, Last*)

Type or print the first, middle, and last name of the mother. This is the mother's current legal name.

6b. MAIDEN SURNAME

Enter the last name of the mother as given at birth or adoption, not a name acquired by marriage.

The mother's name is used to identify the record. The maiden surname is important for matching the record with other records because maiden surname remains constant throughout a lifetime, in contrast to other names which may change because of marriage or divorce.

7. DATE OF BIRTH (*Month, Day, Year*) (**Mother**)

Enter the exact month, day, and year that the mother was born.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

This item is used to calculate the age of the mother, which is one of the most important factors in the study of childbearing and pregnancy outcome.

8a–f MOTHER’S RESIDENCE

The mother’s residence is the place where her household is located. This is not necessarily the same as her “home State,” “voting residence,” “mailing address,” or “legal residence.” The State, county, city, and street address should be for the place where the mother actually lives. Never enter a temporary residence such as one used during a visit, business trip, or vacation. Residence for a short time at the home of a relative, friend, or home for unwed mothers for the purpose of awaiting the delivery is considered temporary and should not be entered here. However, place of residence during a tour of military duty or during attendance at college is *not* considered temporary and should be entered on the report as the mother’s place of residence.

If the mother had been living in a facility where an individual usually resides for a long period of time, such as a group home, mental institution, nursing home, penitentiary, or hospital for the chronically ill, this facility should be entered as the place of residence.

8a. RESIDENCE—STATE (Mother)

Enter the name of the State in which the mother lives. This may differ from the State in her mailing address. If the mother is not a U.S. resident, enter the name of the country and the name of the unit of government that is the nearest equivalent of a State.

8b. RESIDENCE—COUNTY (Mother)

Enter the name of the county in which the mother lives.

8c. RESIDENCE—CITY, TOWN, OR LOCATION (Mother)

Enter the name of the city, town, or location where the mother lives. This may differ from the city, town, or location used in her mailing address.

8d. RESIDENCE—STREET AND NUMBER (Mother)

Enter the number and street name of the place where the mother lives.

If this location has no number and street name, enter the Rural Route number or a description of the place that will aid in identifying the precise location.

8e. RESIDENCE—INSIDE CITY LIMITS? (Yes or no) (Mother)

Enter “Yes” if the location entered in item 8c is incorporated and the mother’s residence is inside its boundaries. Otherwise, enter “No.”

8f. RESIDENCE-ZIP CODE (Mother)

Enter the ZIP Code of the place where the mother resides.

Statistics on fetal deaths are tabulated by place of residence of the mother. These data are used in planning for and evaluating community services and facilities, including maternal health programs. “Inside City Limits” is used to properly assign residence to either the city or the remainder of the county. ZIP Code information may also be used for environmental impact studies for small geographic areas.

9. FATHER’S NAME (*First, Middle, Last*)

State laws vary. In general, if the fetus was:

- Born to a mother who was married at the time of delivery, type or print the name of her husband.
- Conceived in wedlock, but delivered after a divorce was granted or after the husband died, type or print the name of the mother’s deceased or divorced husband.
- Conceived and delivered out of wedlock to a divorced, widowed, or never-married mother, make no entry regarding the father’s name and omit items 10, 11b, 12b, 13b, 14c, and 14d, except as authorized by State law.

Refer problems not covered in these instructions to the State office of vital statistics.

The father’s name is used to identify the record.

10. DATE OF BIRTH (*Month, Day, Year*) (**Father**)

Enter the exact month, day, and year that the father was born.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

This item is used to calculate the age of the father, which is important in the study of childbearing. For example, it is used to study the association between congenital anomalies and children of older parents.

11. OF HISPANIC ORIGIN? (*Specify No or Yes—If yes, specify Cuban, Mexican, Puerto Rican, etc.*)

11a. MOTHER

☐ No ☐ Yes Specify: _____

11b. FATHER

☐ No ☐ Yes Specify: _____

Check “No” or “Yes.” If “Yes” is checked, enter the specific Hispanic group. Item 11 should be “checked” for the mother on all reports and for the father in all cases where the name of the father is shown on the report. Do not leave this item blank. The entry in this item should reflect the response of the informant.

For the purposes of this item, “Hispanic” refers to people whose origins are from Spain, Mexico, or the Spanish-speaking countries of Central or South America. Origin can be viewed as the ancestry, nationality, lineage, or country in which the person or his or her ancestors were born before their arrival in the United States.

There is no set rule as to how many generations are to be taken into account in determining Hispanic origin. A person may report his or her Hispanic origin based on the country of origin of a parent, grandparent, or some far-removed ancestor. The response should reflect what the person considers himself or herself to be and is not based on percentages of ancestry. Although the prompts include the major Hispanic groups of Cuban, Mexican, and Puerto Rican, other Hispanic groups should also be identified in the space provided.

If a person indicates that he or she is of multiple Hispanic origin, enter the origins as reported (for example, Mexican-Puerto Rican).

If a person indicates that he or she is Mexican-American or Cuban-American, enter the Hispanic origin as stated.

This item is not a part of the Race item. A person of Hispanic origin may be of any race. Each question, Race and Hispanic origin, should be asked independently.

Hispanics comprise the second largest minority in this country. This item provides data to measure differences in pregnancy outcome and variations in health care for people of Hispanic and non-Hispanic origin. Without collection of data on persons of Hispanic origin it is impossible to obtain valid demographic and health information on this important group of Americans.

Some States have a very small Hispanic population and may wish to obtain data on other groups. Therefore, they may opt to include a general Ancestry item on their report instead of a specific Hispanic origin item. Instructions for the general Ancestry item follow:

ANCESTRY—Mexican, Puerto Rican, Cuban, African, English, Irish-German, Hmong, etc. (*Specify*)

Enter the Ancestry as obtained from the parent(s) or other informant. This item should be completed for the mother on all reports and for the father in all cases where the name of the father is shown on the report. Do not leave this item blank. The entry in this item should reflect the response of the informant.

For the purposes of this item, ancestry refers to the nationality, lineage, or country in which the person or his or her ancestors were born before their arrival in the United States. American Indian and Alaska Native ancestry should be entered as such.

There is no set rule as to how many generations are to be taken into account in determining ancestry. A person may report ancestry based on the country of origin of a parent, grandparent, or some far-removed ancestor. The response should reflect what the person considers himself or herself to be and is not based on percentages of ancestry.

Some persons may not identify with the foreign birthplace of their ancestors or with a nationality and may report "American." If, after clarification of the intent of this item the person still feels that he or she is an "American," enter "American" on the record.

If a person indicates that he or she is of multiple ancestry, enter the ancestry as reported (for example, English-Scottish-Irish, Mexican-American).

If a respondent gives a religious group—such as Jewish, Moslem, or Protestant—ask for the country of origin or nationality.

This item is not a part of the Race item. Both questions, Race and Ancestry, should be asked independently. This means that for certain groups, the entry will be the same in both items—such as Japanese, Chinese, or Hawaiian. Even if they are the same, the entry should be made in both items. An entry of "Black" or "White" should never be recorded in the Ancestry item.

12. RACE—American Indian, Black, White, etc. (Specify below)

12a. MOTHER

12b. FATHER

Enter the race of the mother and of the father as obtained from the parent(s) or other informant. This item should be completed for the mother on all reports and for the father in all cases where the name of the father is shown on the report. The entry in this item should reflect the response of the informant.

For Asians and Pacific Islanders, enter the national origin of the mother and the father, such as Chinese, Japanese, Korean, Filipino, or Hawaiian.

If the informant indicates that the mother and/or father is of mixed race, enter both races or ancestries.

These items are used to determine the race of the fetus. Race is essential in producing data for minority groups. It is used to study racial variations in childbearing, access to health care, and pregnancy outcomes (perinatal mortality and birth weight). Race is an important variable in planning for and evaluating the effectiveness of health programs.

13. EDUCATION (Specify only highest grade completed)

Elementary/Secondary (0–12)—College (1–4 or 5+)

13a. MOTHER

13b. FATHER

Enter the highest number of years of regular schooling completed by the mother and father in either the space for elementary/secondary school or the space for college. An entry should be made in only one of the spaces. The other space should be left blank. Report only those years of school that were completed. A person who enrolls in college but does not complete one full year should not be identified with any college education in this item.

Count formal schooling. Do not include beauty, barber, trade, business, technical, or other special schools when determining the highest grade completed.

Education is highly related to fertility and birth outcome and is used as an indicator of socioeconomic status. It is used to measure the effect of education and socioeconomic status on health, childbearing, and perinatal mortality.

14a–d OCCUPATION AND BUSINESS/INDUSTRY (Worked during last year)

Enter the information even if the parent(s) was retired, disabled, or institutionalized at the time of fetal death.

14a. MOTHER—Occupation

14c. FATHER—Occupation

Enter the occupation of the parent(s) during the last year. The occupation is the kind of work the parent(s) did during most of the previous year, such as claim adjuster, farmhand, coal miner, homemaker, janitor, store manager, college professor, or civil engineer. Even if the mother resigned her employment early in the pregnancy, that occupation should be reported.

If the mother did not work outside her home in the previous 12 months, report her occupation as “Homemaker” and her industry (item 14b) as “Own home.” If the father did not work during the previous 12 months, report his occupation as “Unemployed” and the industry (item 14d) as “None.” In determining which occupation to report for a parent who held more than one job during the year, give the occupation held during the pregnancy. If both jobs were held during the pregnancy, give the occupation worked for the longest length of time.

Enter “Student” if the parent(s) was a student and was never regularly employed or employed full time during the year prior to delivery. If questions arise about what classification to use for an occupation or industry, you may find the handbook *Guidelines for Reporting Occupation and Industry on Death Certificates* helpful.

14b. MOTHER—Business/Industry

14d. FATHER—Business/Industry

Enter the kind of business or industry to which the occupation listed in 14a and/or 14c was related, such as insurance, farming, coal mining, hardware store, retail clothing, university, or government. Do not enter firm or organization names.

Information from these items is useful in studying occupationally related fetal mortality and in identifying job-related risk areas. These items are used to obtain information on the potential impact of the work environment on the fetus. Researchers believe that the occupational hazards (exposures) to the parent(s) which have the most deleterious effect on the fetus are those that occur during the pregnancy, particularly early in the pregnancy.

Medical and health information

15a–e PREGNANCY HISTORY *(Complete each section)*

When certificates or reports are prepared for a plural delivery, items 15a–e on the certificate or report of the first-delivered should not include any of the deliveries in the present delivery. On the certificate or report of the second delivery, these items should include information about the first delivery of the plural birth. Similarly, for the third delivery, these items should include information about the first and second deliveries, and so on.

15a–c LIVE BIRTHS

15a. Now Living—Number _____ ☐ **None**

Enter the number of children born alive to this mother who are still living at the time of this delivery. Do not include children by adoption.

Check “None” if this is the first delivery to this mother or if all previous children are dead.

15b. Now Dead—Number _____ ☐ **None**

Enter the number of prior children born alive to this mother who are no longer living at the time of this delivery. Do not include children by adoption.

Check "None" if this is the first delivery to this mother or if all previous children are still living.

15c. DATE OF LAST LIVE BIRTH (*Month, Year*)

Enter the date (month and year) of birth of the last live-born child of the mother.

If this report is for the second delivery of a twin set, enter the date of birth for the first baby of the set, if it was born alive. Similarly, for triplets or other multiple deliveries, enter the date of birth of the previous live birth of the set. If all previously born members of a multiple set were born dead, enter the date of the mother's last delivery that resulted in a live birth.

Enter "—," "Not applicable," or "None," if the mother has not had a previous live birth. Do not leave this item blank.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

15d—e OTHER TERMINATIONS (*Spontaneous and induced at any time after conception*)

15d. (Do not include this fetus) Number _____ ☐ **None**

Enter the number of fetuses that were delivered dead regardless of the length of gestation. Include each recognized loss of a product of conception, such as ectopic pregnancy, miscarriage, stillbirth, and spontaneous or induced abortion. Do not include this fetus.

Check "None" if this is the first pregnancy for this mother or if all previous pregnancies resulted in live-born infants.

15e. DATE OF LAST OTHER TERMINATION (*Month, Year*)

Enter the date (month and year) of the last termination of pregnancy that was not a live birth regardless of the length of gestation.

If the mother has never had such a termination, enter "—," "Not applicable," or "None." Do not leave this item blank.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

If this report is for the second delivery of a twin set and the first was born dead, enter the date of delivery of that fetus. Similarly, for other multiple births, if any previous member of the set was born dead, enter the date of delivery of that fetus. If all previously born members of a multiple set were born alive, enter the date of the mother's last delivery that resulted in a fetal death.

These items are used to determine total-birth order, which is important in studying trends in childbearing and child spacing. They are also useful in studying health problems associated with birth order—for example, first births to older women—and determining the relationship of birth order to perinatal mortality.

In studying child spacing, the dates of last live birth and other termination are used to compute the intervals between live births and fetal deaths and between pregnancies. This information allows researchers to measure known risk factors associated with the mother's previous pregnancies, such as prior fetal loss, short interpregnancy interval, and high parity.

16. MOTHER MARRIED? (At delivery, conception, or any time between) (Yes or no)

Enter "Yes" if the mother was married at the time of conception, at the time of delivery, or at any time between conception and delivery. Otherwise, enter "No." In many States the father's name cannot be entered if the mother is not married. A woman is legally married even if she is separated. A person is no longer legally married when the divorce papers are signed. It may be necessary to check with your State or local registrar to determine how to complete this item.

This information is used to monitor the substantial differences in health and fertility between married and unmarried women. It enables the study of the health problems encountered during and after pregnancies of unmarried women. Unmarried women are more likely to require additional health services.

17. DATE LAST NORMAL MENSES BEGAN (Month, Day, Year)

Enter the exact date (month, day, and year) of the first day of the mother's last normal menstrual period, as obtained from the physician or hospital record. If the information is unavailable from these sources, obtain it from the mother.

Enter the full name of the month—January, February, March, etc. Do not use a number or abbreviation to designate the month.

If the exact day is unknown but the month and year are known, obtain an estimate of the day from the mother, her physician, or the medical record. If an estimate of the date cannot be obtained, enter the month and year only.

Enter "Unknown" if the date cannot be determined. Do not leave this item blank.

This item is used in conjunction with the date of delivery to determine the length of gestation. Gestational age is related to fetal morbidity and mortality. Length of gestation is linked with the weight of the fetus to determine the maturity of the fetus.

18–19 PRENATAL CARE

18. MONTH OF PREGNANCY PRENATAL CARE BEGAN—First, Second, Third, etc. (Specify)

Enter the number of the *month in this pregnancy* (second, third, fourth, etc.) when the mother first received care from a physician or other health professional or attended a prenatal clinic. Do *not* enter the name of a given month.

The month of the pregnancy in which prenatal care began is measured from the date the last normal menses began and not from the date of conception. Prenatal care begins when a physician or other health professional first examines and/or counsels the pregnant woman.

If no prenatal care was received, enter "None." If item 19 is reported "None," this item should also be completed as "None." Do not leave this item blank.

19. PRENATAL VISITS—Total Number *(If none, so state)*

Enter the number of visits made for medical supervision of the pregnancy from a physician or other health care provider during the pregnancy. If no prenatal care was received, enter "None." If item 18 is reported as "None," this item should also be completed as "None." Do not leave this item blank.

If "None" is entered in item 18 and a number is reported in item 19, check to determine if a mistake has been made.

This information is used to determine the relationship of prenatal care to the outcome of the pregnancy.

The number of prenatal visits can be used in conjunction with month of pregnancy prenatal care began to assess the adequacy of prenatal care. In addition, this information can be used with length of gestation to compute the Kessner Index,² a quantitative measure of the adequacy of prenatal care.

20. WEIGHT OF FETUS *(Specify unit)*

Enter the weight of the fetus as it is recorded in the hospital record.

Enter the weight as shown in the hospital record in either grams or pounds and ounces. Do not convert from one measure to the other. Specify the type of measure used (grams or pounds and ounces).

This is the single most important characteristic associated with viability of the fetus. It is also related to prenatal care, socioeconomic status, marital status, and other factors surrounding the delivery. Consequently, it is used with other information to plan for and evaluate the effectiveness of health care.

21. CLINICAL ESTIMATE OF GESTATION *(Weeks)*

Enter the length of gestation as estimated by the attendant. Do not compute this information from the date last normal menses began and date of delivery. If the attendant has not done a clinical estimate of gestation, enter "None." Do not leave this item blank.

This item provides information on gestational age when the item on the date last normal menses began contains invalid or missing information. This measure is the basis for reporting fetal deaths in many States. For a record with a plausible date last normal menses began, it provides a cross-check with length of gestation based on ultrasound or other techniques.

22a–b PLURALITY—BIRTH ORDER

When a plural delivery occurs, prepare and file a separate certificate or report for each child or fetus. File certificates and reports relating to the same plural delivery

²D. M. Kessner, Singer, Jr., C. E. Kalk, E. R. Schlesinger: Infant Death: An Analysis by Maternal Risk and Health Care, in *Contrasts in Health Status*, Vol. 1. Washington, D.C. Institute of Medicine, National Academy of Sciences, 1973.

at the same time. However, if holding the completed certificates or reports while waiting for incomplete ones would result in late filing, the completed certificate should be filed first.

22a. PLURALITY—Single, Twin, Triplet, etc. (Specify)

Specify the delivery as single, twin, triplet, quadruplet, etc.

22b. IF NOT SINGLE BIRTH—Born First, Second, Third, etc. (Specify)

Specify the order in which the fetus being reported was delivered—first, second, etc.

If this is a single delivery, leave the item blank.

These items are related to other items on the report (for example, period of gestation and weight of fetus) that have important health implications. The occurrence of plural deliveries is related to the age of the mother and birth order. Survival differences related to order of delivery exist for multiple births.

23–27 CHECKBOX ITEMS

The following medical and health items are formatted into checkboxes. It has been demonstrated that this format produces higher quality and more complete information than open-ended items do. Please review *each* checkbox listed and carefully check the appropriate block(s). Clearly mark an “X” or check the block. The mark should not overlap more than one box.

23a. MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply)

- Anemia (Hct. < 30/Hgb. < 10) 01 ☐
- Cardiac disease 02 ☐
- Acute or chronic lung disease 03 ☐
- Diabetes 04 ☐
- Genital herpes 05 ☐
- Hydramnios/Oligohydramnios 06 ☐
- Hemoglobinopathy 07 ☐
- Hypertension, chronic 08 ☐
- Hypertension, pregnancy-associated 09 ☐
- Eclampsia 10 ☐
- Incompetent cervix 11 ☐
- Previous infant 4000 + grams 12 ☐
- Previous preterm or small-for-gestational-age infant 13 ☐
- Renal disease 14 ☐
- Rh sensitization 15 ☐
- Uterine bleeding 16 ☐
- None 00 ☐
- Other _____ 17 ☐

(Specify)

Check each of the medical risk factors that the mother experienced during this pregnancy. Complications should be entered even if they are a part of the cause of fetal death in item 28. If the mother experienced medical risk factor(s) not identified in the list—for example, other infectious diseases, AIDS, or syphilis—check “Other” and enter the risk factor on the line provided. Medical risk factors should be identified from the hospital or physician record. If there were no medical risk factors, check “None.” Do not leave this item blank.

This information allows for the identification of specific maternal conditions that are often predictive of poor maternal and infant outcome. It can be used for planning intervention and prevention strategies.

23b. OTHER RISK FACTORS FOR THIS PREGNANCY *(Complete all items)*

Tobacco use during pregnancy Yes ☐ No ☐
Average number cigarettes per day _____
Alcohol use during pregnancy Yes ☐ No ☐
Average number drinks per week _____
Weight gained during pregnancy _____ lbs.

Complete each question/statement. Check “Yes” for tobacco use if the mother smoked tobacco at any time during the pregnancy. Check “No” if the mother did not smoke during the entire pregnancy. If “Yes” is checked, specify the average number of cigarettes the mother smoked *per day* during her pregnancy. If, on the average, she smoked less than one cigarette per day, enter “Less than 1.” If “No” is checked, do not make any entry on the line requesting the average number of cigarettes per day.

Check “Yes” for alcohol use if the mother consumed alcoholic beverages at any time during her pregnancy. Check “No” if the mother did not consume any alcoholic beverages during the entire pregnancy. If “Yes” is checked, specify the average number of drinks she consumed *per week*. One drink is equivalent to 5 ounces of wine, 12 ounces of beer, or 1½ ounces of distilled liquor. If, on the average, she drank less than one drink per week, enter “Less than 1.” If “No” is checked, do not make any entry on the line requesting the average number of drinks per week.

Enter the amount of weight *gained* by the mother during the pregnancy in pounds. Do not enter the total weight of the mother. If no weight was gained, enter “None.” If the mother lost weight during her pregnancy, enter the amount of weight lost (for example, “Lost 10 pounds”). Do not leave this item blank.

Information for this item should be obtained from the mother’s medical chart or the physician. If the medical chart is not available or does not include this information and the physician is unavailable, the informant should be asked to respond to these items.

Smoking and drinking during pregnancy may have an adverse impact on pregnancy outcome. This information is used to evaluate the relationship between certain lifestyle factors and pregnancy outcome and to determine at what levels these factors clearly begin to affect pregnancy outcome.

24. OBSTETRIC PROCEDURES (Check all that apply)

Amniocentesis	01	<input type="checkbox"/>
Electronic fetal monitoring	02	<input type="checkbox"/>
Induction of labor	03	<input type="checkbox"/>
Stimulation of labor	04	<input type="checkbox"/>
Tocolysis	05	<input type="checkbox"/>
Ultrasound	06	<input type="checkbox"/>
None	00	<input type="checkbox"/>
Other _____	07	<input type="checkbox"/>

(Specify)

Check each type of procedure that was used during this pregnancy. More than one procedure may be checked. If a procedure was used that is not identified in the list, check "Other" and specify the procedure on the line provided. If no procedures were used, check "None." Do not leave this item blank. This information should be obtained from the mother's medical chart or the physician.

Information on obstetric procedures is used to measure the utilization of advanced medical technology during pregnancy and labor and to investigate the relationship of these procedures to type of delivery and pregnancy outcome.

25. COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply)

Febrile (> 100° F. or 38° C.)	01	<input type="checkbox"/>
Meconium, moderate/heavy	02	<input type="checkbox"/>
Premature rupture of membrane (>12 hours)	03	<input type="checkbox"/>
Abruptio placenta	04	<input type="checkbox"/>
Placenta previa	05	<input type="checkbox"/>
Other excessive bleeding	06	<input type="checkbox"/>
Seizures during labor	07	<input type="checkbox"/>
Precipitous labor (<3 hours)	08	<input type="checkbox"/>
Prolonged labor (>20 hours)	09	<input type="checkbox"/>
Dysfunctional labor	10	<input type="checkbox"/>
Breech/Malpresentation	11	<input type="checkbox"/>
Cephalopelvic disproportion	12	<input type="checkbox"/>
Cord prolapse	13	<input type="checkbox"/>
Anesthetic complications	14	<input type="checkbox"/>
Fetal distress	15	<input type="checkbox"/>
None	00	<input type="checkbox"/>
Other _____	16	<input type="checkbox"/>

(Specify)

Check each medical complication present during labor and/or delivery. Check complications here even if they are a part of the cause of fetal death in item 28. If a complication was present that is not identified in the list, check "Other" and specify the complication on the line provided. If there were no complications, check "None." Do not leave this item blank. This information should be obtained from the mother's medical chart or the physician.

These data are used to identify the pregnancy complications during labor and delivery that are associated with fetal deaths and their relationship to method of delivery and pregnancy outcome.

26. METHOD OF DELIVERY (Check all that apply)

- Vaginal 01 ☐
- Vaginal birth after previous C-section 02 ☐
- Primary C-section 03 ☐
- Repeat C-section 04 ☐
- Forceps 05 ☐
- Vacuum 06 ☐
- Hysterotomy/Hysterectomy 07 ☐

Check the method of delivery of the fetus. If more than one method was used, check all methods that apply to this delivery. Do not leave this item blank. This information should be obtained from the mother’s medical chart or the physician.

This information is used to relate method of delivery with birth outcome, to monitor changing trends in obstetric practice, and to determine which groups of women are most likely to have cesarean delivery. The method of delivery is relevant to the health of mothers, especially if it is by cesarean section. Information from this item can be used to monitor delivery trends across the United States.

27. CONGENITAL ANOMALIES OF FETUS (Check all that apply)

- Anencephalus 01 ☐
- Spina bifida/Meningocele 02 ☐
- Hydrocephalus 03 ☐
- Microcephalus 04 ☐
- Other central nervous system anomalies
(Specify)_____ 05 ☐
- Heart malformations 06 ☐
- Other circulatory/respiratory anomalies
(Specify)_____ 07 ☐
- Rectal atresia/stenosis 08 ☐
- Tracheo-esophageal fistula/Esophageal atresia 09 ☐
- Omphalocele/Gastroschisis 10 ☐
- Other gastrointestinal anomalies
(Specify)_____ 11 ☐
- Malformed genitalia 12 ☐
- Renal agenesis 13 ☐
- Other urogenital anomalies
(Specify)_____ 14 ☐
- Cleft lip/palate 15 ☐
- Polydactyly/Syndactyly/Adactyly 16 ☐
- Club foot 17 ☐
- Diaphragmatic hernia 18 ☐
- Other musculoskeletal/integumental anomalies
(Specify)_____ 19 ☐
- Down’s syndrome 20 ☐
- Other chromosomal anomalies
(Specify)_____ 21 ☐
- None 00 ☐
- Other_____ 22 ☐

(Specify)

Check each anomaly of the fetus. Do not include birth injuries. The checklist of anomalies is grouped according to major body systems. If an anomaly is present that is not identified in the list, check "Other" and specify the anomaly on the line provided. Note that each group of system-related anomalies includes an "Other" category for anomalies related to that particular system. If there is a question as to whether the anomaly is related to a specific system, enter the description of the anomaly in "Other (Specify)" at the bottom of the list. If there are no congenital anomalies of the fetus, check "None." Do not leave this item blank. This information should be obtained from the medical chart or the physician.

Information on congenital anomalies is used to identify health problems that would have required medical care had the infant been born alive. It is important for monitoring the incidence of these conditions among all known products of conception. Collection of this information is also necessary to study unusual clusters of selected anomalies and track trends among different segments of the population.

28. CAUSE OF FETAL DEATH

Detailed instructions for the cause of fetal death section, together with examples of properly completed records, are contained in Part IV. These items are to be completed by the person whose name appears in item 30.

Part I. Cause of fetal death

Enter on line (a) the fetal or maternal condition directly causing the fetal death. Enter on lines (b) and (c) fetal and/or maternal conditions, if any, that gave rise to the immediate cause on line (a), stating the underlying cause last. Also, specify whether the condition was fetal or maternal.

Part II. Other significant conditions

Enter any conditions contributing to the fetal death but not resulting in the underlying cause listed in Part I.

Cause of fetal death should include information provided by the pathologist if an autopsy or other type of postmortem examination was done. If microscopic examinations for a fetal death are still pending at the time the report is filed, the medical examiner or coroner should report the additional information as soon as it is available.

This item provides medical information for ranking causes of fetal death and for analyzing the conditions leading to fetal death. Information on cause of fetal death is correlated with information from other items on the report, such as length of gestation and prenatal care.

29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)

Indicate when the fetus died by specifying one of the above choices.

This item is used as a check to ensure that the delivery was properly reported as a fetal death and was not a live birth.

30. ATTENDANT’S NAME AND TITLE (Type/Print)

NAME _____
☐ M.D., ☐ D.O., ☐ C.N.M., ☐ Other Midwife
☐ Other (*Specify*)

Type or print the full name of the physician or other person in attendance at this delivery on the line provided and check the appropriate box to identify his or her title. M.D. = doctor of medicine, D.O. = doctor of osteopathic medicine, C.N.M. = certified nurse midwife. Lay midwives should be identified as “Other Midwife.” If “Other (Specify)” is checked, type or print the title of the attendant on the line provided.

This item identifies the person to be contacted and queried for missing medical information. Additionally, the type of attendant is used to assess the service rendered and quality of care.

31. NAME AND TITLE OF PERSON COMPLETING REPORT (Type/Print)

NAME _____
TITLE _____

Type or print the full name and title of the person completing the report.

This item identifies the person to be contacted for missing information.

Appendixes

- A. The U.S. Standard Certificate of Death**
- B. The U.S. Standard Report of Fetal Death**
- C. Definitions of Live Birth and Fetal Death**
- D. The Vital Statistics Registration System in the United States**

Appendix A

The U.S. Standard Certificate of Death

U.S. STANDARD
CERTIFICATE OF DEATH

1. DECEDENT'S NAME (First, Middle, Last)
John Leonard Palmer

2. SEX
Male

3. DATE OF DEATH (Month, Day, Year)
June 20, 1989

4. SOCIAL SECURITY NUMBER
123-45-6789

5a. AGE—Last Birthday (Year)
78

5b. UNDER 1 YEAR
Months **0** Days **0**

5c. UNDER 1 DAY
Hours **0** Minutes **0** Seconds **0**

6. DATE OF BIRTH (Month, Day, Year)
April 23, 1911

7. BIRTHPLACE (City and State or Foreign Country)
San Francisco, CA

8. WAS DECEDENT EVER IN U.S. ARMED FORCES?
Yes

9a. PLACE OF DEATH (Check only one; see instructions on other side)
☒ Hospital ☐ Inpatient ☐ ER/Outpatient ☐ DOA ☐ Other ☐ Nursing Home ☐ Residence ☐ Other (Specify)

9b. FACILITY NAME (If not institution, give street and number)
Mountain Memorial Hospital

9c. CITY, TOWN, OR LOCATION OF DEATH
Frederick

9d. COUNTY OF DEATH
Frederick

10. MARITAL STATUS: Married
Married

11. SURVIVING SPOUSE (If wife, give maiden name)
Sheila Marie Sonner

12a. DECEDENT'S USUAL OCCUPATION (Give kind of work done during past of working life. Do not use retired.)
Public Accountant

12b. KIND OF BUSINESS/INDUSTRY
Self-employed

13a. RESIDENCE—STATE
Maryland

13b. COUNTY
Frederick

13c. CITY, TOWN, OR LOCATION
Thurmont

13d. STREET AND NUMBER
245 Lone View Road

14. WAS DECEDENT OF HISPANIC ORIGIN? (Specify: No or Yes. If yes, specify Cuban, Mexican, Puerto Rican, etc.)
No

15. RACE—American Indian, Black, White, etc. (Specify)
White

16. DECEDENT'S EDUCATION (Specify only highest grade completed)
Elementary/Secondary (10-12) College (14 or 5+)

17. FATHER'S NAME (First, Middle, Last)
Stanley Leonard Palmer

18. MOTHER'S NAME (First, Middle, Maiden Surname)
Lorraine Ellen Russell

19a. INFORMANT'S NAME (Type/Print)
Sheila Marie Palmer

19b. MAILING ADDRESS (Street and Number or Rural Route Number, City or Town, State, Zip Code)
245 Lone View Road, Thurmont, MD 20212

20a. METHOD OF DISPOSITION
☒ Burial ☐ Cremation ☐ Removal from State ☐ Donation ☐ Other (Specify)

20b. PLACE OF DISPOSITION (Name of cemetery, crematorium, or other place)
Wesley Memorial Cemetery

20c. LOCATION—City or Town, State, other place
Frederick, MD

21a. SIGNATURE OF FUNERAL SERVICE LICENSEE OR PERSON ACTING AS SUCH
Robert A. Boone

21b. LICENSE NUMBER (If Licensed)
2569114

22. NAME AND ADDRESS OF FACILITY
**Boone and Sons Funeral Home
475 E. Main St., Frederick, MD 20216**

23a. To the best of my knowledge, death occurred at the time, date, and place stated.
Signature and Title: Julie P. Kovar, M.D.

23b. LICENSE NUMBER
624998075

23c. DATE SIGNED (Month, Day, Year)
June 20, 1989

24. TIME OF DEATH
3:05 AM

25. DATE PRONOUNCED DEAD (Month, Day, Year)
June 20, 1989

26. WAS CASE REFERRED TO MEDICAL EXAMINER/CORONER? (Yes or no)
No

27. PART I. Enter the diseases, injuries, or complications that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on each line.
Immediate Cause (Final disease or condition resulting in death):
a. **Pulmonary Embolism**
b. **Congestive Heart Failure**
c. **Acute Myocardial Infarction**
d. **Chronic Ischemic Heart Disease**
Underlying Cause (Disease or injury that initiated events resulting in death):
Diabetes mellitus, Hypertension

28a. WAS AN AUTOPSY PERFORMED? (Yes or no)
No

28b. WERE AUTOPSY FINDINGS AVAILABLE PRIOR TO COMPLETION OF CAUSE OF DEATH? (Yes or no)
No

29. MANNER OF DEATH
☒ Natural ☐ Pending Investigation ☐ Accident ☐ Suicide ☐ Could not be Determined ☐ Homicide

30a. DATE OF INJURY (Month, Day, Year)
June 20, 1989

30b. TIME OF INJURY
M

30c. INJURY AT WORK? (Yes or no)
No

30d. PLACE OF INJURY—At home, farm, street, factory, office, building, etc. (Specify)
At home

30e. LOCATION (Street and Number or Rural Route Number, City or Town, State)
245 Lone View Road, Thurmont, MD 20212

31a. CERTIFIER (Check only one)
☒ CERTIFYING PHYSICIAN (Physician certifying cause of death when another physician has pronounced death and completed item 23i) To the best of my knowledge, death occurred due to the cause(s) and manner as stated.
☐ PRONOUNCING AND CERTIFYING PHYSICIAN (Physician both pronouncing death and certifying to cause of death) To the best of my knowledge, death occurred at the time, date, and place, and due to the cause(s) and manner as stated.
☐ MEDICAL EXAMINER/CORONER On the basis of examination and/or investigation, in my opinion, death occurred at the time, date, and place, and due to the cause(s) and manner as stated.

31b. SIGNATURE AND TITLE OF CERTIFIER
Edmund A. Stone, M.D.

31c. LICENSE NUMBER
1299654

31d. DATE SIGNED (Month, Day, Year)
June 22, 1989

32. NAME AND ADDRESS OF PERSON WHO COMPLETED CAUSE OF DEATH (Item 27) (Type/Print)
Edmund Matthew Stone, M.D. 23 Porter Drive Frederick, MD 29885

33. REGISTRAR'S SIGNATURE
Lois T. Burrette

34. DATE FILED (Month, Day, Year)
June 23, 1989

Appendix B

The U.S. Standard Report of Fetal Death

TYPE-PRINT IN PERMANENT BLACK INK FOR INSTRUCTIONS SEE HANDBOOK

FATHER'S

MOTHER

MULTIPLE BIRTHS

FETAL DEATH(S)

DEPARTMENT OF HEALTH AND HUMAN SERVICES - NATIONAL CENTER FOR HEALTH SERVICES - 1989 REVISION

U.S. STANDARD REPORT OF FETAL DEATH

STATE FILE NUMBER

1. FACILITY NAME (If not institution, give street and number)

2. CITY, TOWN, OR LOCATION OF DELIVERY

3. COUNTY OF DELIVERY

4. DATE OF DELIVERY (Month, Day, Year)

5. SEX OF FETUS

6a. MOTHER'S NAME (First, Middle, Last)

6b. MAIDEN SURNAME

7. DATE OF BIRTH (Month, Day, Year)

8a. RESIDENCE STATE

8b. COUNTY

8c. CITY, TOWN, OR LOCATION

8d. STREET AND NUMBER

9a. INSIDE CITY LIMITS? (Yes or no)

9b. ZIP CODE

9c. FATHER'S NAME (First, Middle, Last)

10. DATE OF BIRTH (Month, Day, Year)

11. OF HISPANIC ORIGIN? (Specify No or Yes - If yes, specify Cuban, Mexican, Puerto Rican, etc.)

12. RACE - American Indian, Black, White, etc. (Specify below)

13. EDUCATION (Specify only highest grade completed) (Elementary/Secondary (0-12) College (13-16 or S+))

14. OCCUPATION AND BUSINESS/INDUSTRY (Worked during last year) (Occupation Business/Industry)

11a. ☐ No ☒ Yes

11b. ☐ No ☒ Yes

11c. Specify: Puerto Rican

12a. White

12b. White

13a. 12

13b. 12

14a. Cashier

14b. Auto engine repair shop

15. PREGNANCY HISTORY (Complete each section)

16. DATE OF LAST OTHER TERMINATION (Month, Year)

17. MOTHER MARRIED? (At delivery, conception, or any time between) (Yes or no)

18. MONTH OF PREGNANCY PRENATAL CARE BEGAN - First, Second, Third, etc. (Specify)

19. PRENATAL VISITS - Total Number (If none so state)

20. WEIGHT OF FETUS (Specify Unit)

21. CLINICAL ESTIMATE OF GESTATION (Specify weeks)

22a. PLURILITY - Single, Twin, Triplet, etc. (Specify)

22b. IF NOT SINGLE BIRTH - Born First, Second, Third, etc. (Specify)

23a. MEDICAL RISK FACTORS FOR THIS PREGNANCY (Check all that apply)

24. OBSTETRIC PROCEDURES (Check all that apply)

25. COMPLICATIONS OF LABOR AND/OR DELIVERY (Check all that apply)

26. METHOD OF DELIVERY (Check all that apply)

27. CONGENITAL ANOMALIES OF FETUS (Check all that apply)

28. OTHER RISK FACTORS FOR THIS PREGNANCY (Complete all items)

29. FETUS DIED BEFORE LABOR, DURING LABOR OR DELIVERY, UNKNOWN (Specify)

30. ATTENDANT'S NAME AND TITLE (Type/Print)

31. NAME AND TITLE OF PERSON COMPLETING REPORT (Type/Print)

Appendix C

Definitions of live birth and fetal death

The following definitions have been adopted by the World Health Assembly and are recommended for use in the United States.

Live birth

Live birth is the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy, which, after such expulsion or extraction, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached.

Important—If an infant breathes or shows any other evidence of life after complete delivery, even though it may be only momentary, the birth must be registered as a live birth and a death certificate must also be filed.

Fetal death

Fetal death is death prior to the complete expulsion or extraction from its mother of a product of human conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such expulsion or extraction, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Important—The definitions of fetal death followed in some States differ from the standard definition, particularly with respect to the minimum period of gestation for which a fetal death report is required. If you have any questions about the definitions used in your State, contact your State office of vital statistics.

Appendix D

The Vital Statistics Registration System in the United States

The registration of births, deaths, fetal deaths, and other vital events³ in the United States is a State and local function. The civil laws of every State provide for a continuous, permanent, and compulsory vital registration system. Each system depends to a very great extent on the conscientious efforts of the physicians, hospital personnel, funeral directors, coroners, and medical examiners in preparing or certifying information needed to complete the original records. For a graphic presentation of the registration system, see the accompanying chart, "The Vital Statistics Registration System in the United States."

Most States are divided geographically into local registration districts or units to facilitate the collection of vital records. A district may be a township, village, town, city, county, or other geographic area or a combination of two or more of these areas. In some States, however, the law provides that records of birth, death, and/or fetal death be sent directly from the reporting source (hospital, physician, or funeral director) to the State vital statistics office. In this system functions normally performed by a local registration official are assumed by the staff of the State office.

In States with a local registrar system, the local registrar collects the records of events occurring in his or her area and transmits them to the State vital statistics office. The local registrar is required to see that a complete certificate is filed for each event occurring in that district. In many States this official also has the duty of issuing burial-transit permits to authorize the disposition of dead human bodies. In many States this official is also required to keep a file of all events occurring within his or her district and, if authorized by State law and subject to the restrictions on issuance of copies as specified by the law, may be permitted to issue copies of these records.

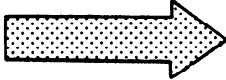
The State vital statistics office inspects each record for promptness of filing, completeness, and accuracy of information; queries for missing or inconsistent information; numbers the records; prepares indexes; processes the records; and stores the documents for permanent reference and safekeeping. Statistical information from the records is tabulated for use by State and local health departments, other governmental agencies, and various private and voluntary organizations. The data are used to evaluate health problems and to plan programs and services for the public.

³Vital events are defined as live births, deaths, fetal deaths, marriages, divorces, and induced terminations of pregnancy, together with any change in civil status that may occur during an individual's lifetime.

An important function of the State office is to issue certified copies of the certificates to individuals in need of such records and to verify the facts of birth and death for agencies requiring legal evidence of such facts.

The National Center for Health Statistics (NCHS) in the Public Health Service is vested with the authority for administering the vital statistics functions at the national level. Data tapes of information derived from individual records registered in the State offices—or, in a few cases, copies of the individual records themselves—are transmitted to NCHS. From these data or copies, monthly, annual, and special statistical reports are prepared for the United States as a whole and for the component parts—cities, counties, States, and regions—by various characteristics such as sex, race, and cause of death. The statistics are essential in the fields of social welfare, public health, and demography. They are also used for various administrative purposes, in both business and government. NCHS serves as a focal point, exercising leadership in establishing uniform practices through model laws, standard certificate forms, handbooks, and other instructional materials for the continued improvement of the vital registration system in the United States.

The Vital Statistics Registration System in the United States

<i>Responsible Person or Agency</i>	<i>Birth Certificate</i>	<i>Death Certificate</i>	<i>Fetal Death Report (Stillbirth)</i>
Hospital authority	<ol style="list-style-type: none"> 1. Completes entire certificate in consultation with parent(s). 2. Files certificate with local office or State office per State law. 	<p>When death occurs in hospital, may initiate preparation of certificate: Completes information on name, date, and place of death; obtains certification of cause of death from physician; and gives certificate to funeral director.</p> <p>NOTE: If the attending physician is unavailable to certify to the cause of death, some States allow a hospital physician to certify to only the fact and time of death. With legal pronouncement of the death and permission of the attending physician, the body can then be released to the funeral director. The attending physician still must complete the cause-of-death section prior to final disposition of the body.</p>	<ol style="list-style-type: none"> 1. Completes entire report in consultation with parent(s). 2. Obtains cause of fetal death and other medical and health information from physician. 3. Obtains authorization for final disposition of fetus. 4. Files report with local office or State office per State law.
Funeral director		<ol style="list-style-type: none"> 1. Obtains personal facts about decedent and completes certificate. 2. Obtains certification of cause of death from attending physician or medical examiner or coroner. 3. Obtains authorization for final disposition per State law. 4. Files certificate with local office or State office per State law. 	<p>If fetus is to be buried, the funeral director is responsible for obtaining authorization for final disposition.</p> <p>NOTE: In some States the funeral director, or person acting as such, is responsible for all duties shown above under hospital authority.</p>
Physician or other professional attendant	For inhospital birth, verifies accuracy of medical information and signs certificate. For out-of-hospital birth, duties are same as those for hospital authority, shown above.	Completes certification of cause of death and signs certificate.	Provides cause of fetal death and other medical and health information.

<p>Local office* (may be local registrar or city or county health department)</p>	<ol style="list-style-type: none"> 1. Verifies completeness and accuracy of certificate and queries incomplete or inconsistent certificates. 2. If authorized by State law, makes copy or index for local use. 3. Sends certificates to State registrar. 	<ol style="list-style-type: none"> 1. Verifies completeness and accuracy of certificate and queries incomplete or inconsistent certificates. 2. If authorized by State law, makes copy or index for local use. 3. Sends certificates to State registrar. 4. Sends certificates to State registrar. 	<p>If State law requires routing of fetal death reports through local office, the local office performs the same functions as shown for the death certificate.</p>
<p>City and county health departments use data derived from these records in allocating medical and nursing services, following up on infectious diseases, planning programs, measuring effectiveness of services, and conducting research studies.</p>			
<p>State registrar, office of vital statistics</p>	<ol style="list-style-type: none"> 1. Queries incomplete or inconsistent information. 2. Maintains files for permanent reference and is the source of certified copies. 3. Develops vital statistics for use in planning, evaluating, and administering State and local health activities and for research studies. 4. Compiles health-related statistics for State and civil divisions of State for use of the health department and other agencies and groups interested in the fields of medical science, public health, demography, and social welfare. 5. Sends data derived from records or copies of records to the National Center for Health Statistics. 		
<p>Public Health Service, National Center for Health Statistics</p>	<ol style="list-style-type: none"> 1. Prepares and publishes national statistics of births, deaths, and fetal deaths; constructs the official U.S. life tables and related actuarial tables. 2. Conducts health and social-research studies based on vital records and on sampling surveys linked to records. 3. Conducts research and methodological studies in vital statistics methods, including the technical, administrative, and legal aspects of vital records registration and administration. 4. Maintains a continuing technical assistance program to improve the quality and usefulness of vital statistics. 		

* Some States do not have local vital registration offices. In these States, the certificates or reports are transmitted directly to the State office of vital statistics.